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ABSTRACT

Financial patterns at American University, Catholic University, George Washington University, and Georgetown University were investigated. Specific areas of concern include: revenue sources and expenditures, balance sheet formats, financial health, the effect of external factors such as enrollment and inflation, financial performance, ability to repay debts, degree of financial risk, and trends in financing the institution. Balance sheet ratios, performance ratios, and nonfinancial ratios (e.g., expenditure per student) were computed. The institutions were different in financial structure composition, management styles, and trends, but similar in problems, including ways to control internal inflation and operating/maintenance expenses and debt burdens. The universities had a relatively high degree of exposure to financial risk with limited possibility of reduction under the present economic conditions. The schools also had a deficiency in educational and general revenues to cover educational and general expenditures. Additional findings and an extensive literature review are provided. (SW)

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A DESCRIPTION, ANALYSIS, AND EVALUATION OF THE FINANCIAL STRUCTURE OF FOUR PRIVATE UNIVERSITIES IN THE CONSORTIUM OF UNIVERSITIES OF THE WASHINGTON METROPOLITAN AREA BETWEEN 1973-74 AND 1982-83

by

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The School of Education and Human Development

of The George Washington University

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of

Doctor of Education

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Dissertation directed by

Jonathan D. Fife

Professor of Education

DEDICATION

To my beloved wife, Nancy E. Jaimes de Beaufond, M.D. and to my sons, David Rafael and Edwin Alexander, who suffered with patience the obvious consequences of my full-time dedication to the accomplishment of this research study.

Rafael Emilio Beaufond-Marcano

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Rafael E. Beaufond
Washington, D.C.
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Analysis of Financial Structures... #17

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CHAPTER I

INTRODUCTION

In common with most business enterprises of the 1980s, higher education institutions are confronting even tighter budgets that reflect market trends of increasing competition for services in an austere financial climate. This means that, paradoxically, while students and their families still perceive the social (economic) value of a higher education beyond high school, the institutions themselves are struggling to find the resources to meet the demand for their services. The resources acquired by higher education institutions must be carefully managed to ensure revenues meet expenditures or, if they do not, that the shortfall is not a precursor of a trend that cannot be reversed by better resource management and acquisition techniques.

However, for most colleges and universities the determination of relative financial health can be problematic. Most institutions, owing partly to their diversity, often do not use comparable financial reporting (McDonald, 1980). Thus, the great virtue of the American higher education enterprise--meeting the learning needs of a diverse population through institutional diversity (Carnegie Council on Policy Studies in Higher Education, 1980; Brubacher & Rudy, 1976)--has contributed to institutions being less than able to analyze their own financial reports in relation to those with similar institutional profiles or even to compare financial report procedures adequately to profitmaking enterprises, which use customary business accounting principles and practices.

There are two reasons for this profusion of budgetary approaches among institutions of higher learning: (1) the nonprofit nature of the enterprise itself, and (2) the uniqueness of the revenue flow into the individual institutions, which sets each apart from even those with apparently similar missions and goals (Collier, 1974; Collier & Allen, 1980).

First, by design, the majority of higher education institutions are not under an obligation in their statement of purpose to "make a profit." Historically, the tripartite mission of American higher education has been to instruct, to do research, and to perform public service. Hence, within this context, institutions strive to use their resources as efficiently and effectively as possible to attain these objectives, with no mandate to show a yearly excess of revenues over expenditures. Nevertheless, higher education institutions are not blind to the fact that they must garner the necessary financial resources to meet current and recurrent expenditures and to anticipate future needs. Clearly the accumulation of financial reserves is a part of this. This analysis of financial data will necessarily focus not only on profit and loss columns, but on how the resources are expended to meet unique and occasionally conflicting institutional goals (Collier, 1974).

Second, the uniqueness of revenue flow contributes to noncomparability of financial reporting except in the general categories of restricted and unrestricted funds. Each institution will have funds designated for special purposes under "restricted funds," meaning these funds cannot be used for any other purpose. Examples are student work/study funds and grant monies, the disbursement of which is carefully prescribed in line items by contractual agreement. Unrestricted funds are any that are simply undesignated, like student tuition monies, some alumni donations or legacies, and investment returns. Thus, the institutional products--instruction, research, and public service--are paid for out of various revenue sources, each covering a percentage of the total institutional cost. By implication, institutional revenues are not always received from sources that directly benefit from the "products" of higher education. Furthermore, this variety of institutional funding resources within the categories of restricted and unrestricted carries with it an additional aspect not common to the profit sector, namely, the concept of "stewardship." This can be defined as the legal responsibility of an institution to use restricted funds according to prescribed purposes and to account for all funds according to prespecified and often diverse formulas (Collier, 1974; Collier & Allen, 1980).

Therefore, the type of financial assessment required for higher education institutions must take into consideration the nonprofit nature of higher education and its unique flow of revenues. Thus, a framework for the financial evaluation of this type of institution must be set to consider available resources, emerging resource trends, and special institutional needs for these resources. Although focus is on financial resources, other elements--faculty, students, fixed assets, and programmatic resources--should be examined as well (Dickmeyer & Hughes, 1982a).

The financial status of an institution is difficult to evaluate; shifts in one type of resource, such as cash, may determine changes in other resources, such as new building construction. The interrelationship among financial resources requires a comprehensive study of an institution's overall financial structure (Dickmeyer & Hughes, 1982a).

Clear understanding of the trends and condition of financial resources is crucial to the timely detection of any institutional decline. The focus on financial resources is based on the belief that internal and external decisions and events affect such resources. Internal factors include policy decisions and their implementations; external factors include inflation and income availability. Also the accumulation of financial power is highly relevant to private institutions, since the availability of funds enables these institution to react to changes in the environment. Determinants of financial potency include having resources to support institutional innovation and change to guarantee an institution's survival. Institutions with limited financial resources experiment at much greater risk than institutions with more financial power. Furthermore, there exists a set of factors that exposes institutions to risks and that can partially determine the level of financial resources needed to sustain financial health. Such factors determine the size and type of financial resources needed to face adverse trends by providing the requisite flexibility and thus financial protection (Dickmeyer & Hughes, 1982a, 1982b).

According to Dickmeyer and Hughes (1982a), institutional financial self-assessment should take into consideration a number of factors. For example, (1) the more an institution of higher education depends on highly volatile revenue sources, like restricted funds, the greater the need for more financial resources; (2) greater resources may be necessary when a large amount of the institution's budget is needed to finance relatively fixed expenditures, i.e., debt service and salaries of tenured faculty; and (3) nonfinancial resources (number and quality of the faculty, students, program offerings, and the condition of the buildings) may become sources of external or internal pressure.

SIGNIFICANCE OF THE STUDY

A description, analysis, and evaluation of the financial resources of higher education institutions constitute the most suitable approach to assess the financial health of higher education institutions. Virtually all higher education institutions in the U.S. have been affected by the rising cost of energy, plant construction, library books, and most services. Other factors include a current decline in the number of traditional college-age students, the maturing of buildings and faculty added during the 1960s and 1970s, and the increase in regulatory requirements. These factors place stress on the financial ability of higher education institutions (Dickmeyer & Hughes, 1982b).

The nature and size of these financial stresses must be analyzed in such a way that appropriate strategies and policies can be formulated. Appropriate financial assessment provides the basis for determining courses of action that can reasonably assure institutional survival and health. The primary objective of a financial analysis must be to provide the necessary tools to evaluate the higher education institution's financial status relative to its financial risk. Such financial risk depends on external factors such as demographic changes, the general economy, and the institution's revenue and expenditure structure. Therefore, the study should provide a statistical methodology for the assessment of institutional risks and resources. The computed statistics can then provide a rationale for development of appropriate financial strategies by institutional executives (Dickmeyer & Hughes, 1982b).

Carol Frances (1982) observes that good financial analysis and reporting are basic to using current resources effectively and in communicating persuasively with those who make the public and private decisions affecting the level of resources available to higher education in the future.

Accordingly, the proposed study will provide useful information for policymakers, decisionmakers, and others involved in the financing of higher education institutions. The financial information provided by this study can be used as a guide by any institution of higher education to compare its own operational data to that of the aggregate of institutions that will be studied. Through this process a manager or administrator should be able to detect variations from the norm at his or her own institution. Also, Federal, state and local governments, private philanthropists, and other benefactors can use the data in evaluating their plans to provide funds to the institutions studied.

STATEMENT OF THE PROBLEM

The study of the financing of higher education institutions requires an extensive analysis of the conditions affecting institutional operations. Consequently, people interested in the financial affairs of higher education institutions are likely to ask three basic questions (Minter et al., 1982):

1. Are the institutions under study financially healthy or not as of the reporting date?

2. Are the institutions under study financially better off or not at the end than at the beginning of the year reported on?

3. Did the institutions under study stay within their means during the year being reported on? (p. 26)

These three questions focus on what has happened in the past. Although most people agree that historical information does not always provide a basis for predicting the future, there is a need to understand history to prepare effectively for the future (Minter et al., 1982).

The National Association of College and University Business Officers (NACUBO) states its position regarding the financial analysis of higher education institutions in the report "Financial Self-Assessment: A Work Book for Colleges." According to this report, a summary of the higher education institution's financial condition should include answers to the following questions (Dickmeyer & Hughes, 1982b):

1. What have been the major external factors affecting the higher education institution's financial condition?

2. What have been the major administrative policies affecting the institution's financial conditions?

3. How have the institution's financial resources been affected by external factors and administrative policies?

4. How has the institution's financial risk position changed in relation to the institution's financial resources?

5. What changes have occurred in nonfinancial resources that may have had an effect on the institution's financial resources?

6. What has been the overall financial condition of the institutions studied?

However, there is a need to go beyond these questions in the interest of a more comprehensive analysis that permits the close assessment of financial condition, financial performance, creditworthiness, and trends in the financing of higher education institutions (Minter et al., 1982). Hence, the following questions should be added:

1. What has been the financial performance of the institutions under study?

2. What has been the creditworthiness of the institutions under study?

3. What are the trends in the financing of the institutions?

Using the financial analysis framework for higher education institutions described above, this non-hypothecated study will describe, analyze, and evaluate the financial structure that supported the private universities of the Consortium of Universities in the Washington, D.C. Metropolitan Area between 1973-74 and 1982-83. The study will describe, analyze, and evaluate the elements that

that comprise each institutions financial structure as they relate to:

1. their financial health;
2. their respective financial condition;
3. their respective financial performance;
4. their respective creditworthiness; and
5. trends in their respective financing approaches.

Accordingly, the following research questions have been formulated:

1. What elements have comprised the financial structure of the selected private universities of the Consortium of Universities of the Washington Metropolitan Area and how has each element contributed to that financial structure between 1973-74 and 1982-83?

- What has been the composition of their revenue sources?

- What has been the composition of their current expenditures?

- How have they evolved their balance sheet format between 1973-74 and 1982-83?

2. What has been the financial condition of these private universities between 1973-74 and 1982-83?

- How financially healthy have these institutions been between 1973-74 and 1982-83?

- How have the financial revenues of these universities been affected by the major external factors (i.e., enrollment and inflation)?

- How have the financial resources of these universities been affected by internal administrative policies?

- What changes have occurred in the risk position of these institutions in relation to their financial resources?

- What changes have occurred in their nonfinancial resources that may have caused changes in their overall financial resource profile?

- What is the overall financial condition of each university?

3. What has been the financial performance of these institutions between 1973-74 and 1982-83?

- How have the institutions performed financially in relation to contributions (of the resources) and demand ratios?

- What has been the overall financial performance of each institution between 1973-74 and 1982-83?

4. What has been the creditworthiness of these institutions between 1973-74 and 1982-83?

- What has been their ability to repay their debts between 1973-74 and 1982-83?

- What has been their degree of risk during that time period?

5. What have been the trends in the financing of the institutions between 1973-74 and 1982-83?

METHODOLOGY

The proposed study is descriptive in nature. The use of percentages will form the analysis of the elements comprising each institution's financial structure to permit the determination of the proportional significance of these elements in that financial structure.

Ratio analysis will be performed to obtain a view of the key factors affecting institutional activities and to define the trends in the financing of each institution (Minter et al., 1982). Thus, this financial analysis tool would permit the evaluation of financial conditions by means of the determination of the balance sheet ratios (Minter et al., 1982). Ratio analysis also constitutes a major tool of financial analysis for the evaluation of the major administrative policies affecting each institution's financial condition. Although many of these policies are unwritten, ratio analysis will permit ex post facto evaluation of most of the policies guiding the financial approach of a given institution (Dickmeyer & Hughes, 1982b). Examples of these ratios are:

1. Balance Sheet Ratios

   Current Ratio: current assets divided by current liabilities (Minter & Bowen, 1978).

Liquidity Ratio: liquid assets divided by current liabilities (Minter & Bowen, 1978).

Equity Ratio: total assets divided by total liabilities (Minter & Bowen, 1980).

Plant Equity Ratio: net investment in plant divided by plant debt (Minter, 1980; Minter et al., 1982).

Long-term (Plant) Debt to Revenue Ratio: long-term or plant debt divided by current fund revenues (Van Horne, 1983).

2. Performance Ratios

Contribution Ratios: each revenue resource divided by educational and general expenditures and mandatory transfers (Minter 1980; Minter et al., 1982).

Demand or Allocation Ratios: each functional category of educational and general expenditures divided by educational and general revenues or by educational and general expenditures and mandatory transfers (Minter 1980; Minter et al., 1982).

Net Operating Ratios: (a) net revenue ratio, (b) educational and general revenue ratio, and the net auxiliary enterprise revenue ratio (Minter, 1980; Minter et al., 1982).

Net Revenue Ratio: total current fund revenues less the total current fund expenditures and mandatory transfers divided by total current fund revenues (Minter, 1980; Minter et al., 1982).

Educational and General Revenue Ratio: total educational and general revenues less educational and general expenditures plus mandatory transfers divided by educational and general revenues (Minter, 1980; Minter et al., 1982).

Net Auxiliary Enterprise Revenue Ratio: total auxiliary enterprise revenues less total auxiliary enterprise and related mandatory transfers divided by total auxiliary enterprise revenues (Minter, 1980; Minter et al., 1982).

3. Nonfinancial Ratios

Student Costs or Expenditures per Student (current dollars): educational and general expenditures plus mandatory transfers divided by full-time equivalent students (Dickmeyer & Hughes, 1982b).

Student Costs or Expenditure per Student (constant dollars): educational and general expenditures plus mandatory transfers (constant dollars) divided by full-time equivalent students (Dickmeyer and Hughes, 1982b).

Trends in Enrollment: the relation of percent enrollments to enrollments in a given base year (Minter et al., 1982).

Student-to-Faculty Ratio: full-time equivalent students divided by full-time equivalent faculty (Dickmeyer & Hughes, 1982b).

Enrollment Sensitivity: percentage of change in enrollment divided by percentage of change in tuition prices (extrapolated from Dickmeyer & Hughes, 1982b).

The financing strategy of the institution can be measured by the changes in the institution's dependence on tuition and gift revenues (Dickmeyer & Hughes, 1982b).

An analysis of the statistical trends related to financial resources may identify the effect of external factors and administrative policies on such financial resources. Thus, adequate financial resources means availability of funds to pay expenses and debts on time, reserves to protect the institution from adverse contingencies (Dickmeyer & Hughes, 1982b), and sufficient capital resources to provide extra support for programs over and above student tuition revenue.

The changes in the financial risk position of higher education institutions in relation to their financial resources, as indicated by the available funds ratio, must be compared to trends in financial resource flexibility. For example, an increase in the debt service to revenue ratio indicates that the institution's policymakers and decisionmakers should analyze their policies for building financial reserves. An increase in the need for financial resources will occur when there is an increase in the financial inflexibility of the institution's sources (Dickmeyer & Hughes, 1982b).

The comparison of trends in the financial resources and nonfinancial resources data will help to determine the changes undergone in nonfinancial resources that may have influenced the institution's financial resources. This kind of trend analysis permits the determination of the allocation balance among institutional resources (Dickmeyer & Hughes, 1982b). For example, financial reserves may increase when faculty salaries, building maintenance, or institutional attraction shrinks (Dickmeyer & Hughes, 1982b).

The overall financial condition will be assessed by an analysis of the balance sheet ratios related to each institution's financial profile (Minter et al., 1980; Dickmeyer & Hughes, 1982b).

Regarding the assessment of financial performance in relation to net operating ratios, the analysis must be related to the financial activities reported for current funds. Current funds constitute the financial resources to support the traditional mission of the institutions, i.e., instruction, research, and public service, (including hospital services and so on) (Minter et al., 1982). Thus, through the examination of the Statement of Current Funds Revenues, Expenditures and Other Changes, it is possible to depict the institution's financial performance for a given fiscal year (Minter et al., 1982). Consequently, this information can be compared to the financial performance corresponding to preceding and subsequent years as well as the financial performance of other similar institutions. Determining whether or not the institution being analyzed lives within its means during a given time period is the main objective of the evaluation of financial performance (Minter et al., 1982). For this kind of assessment, current fund net operating ratios provide the necessary financial statistics. Such ratios are (Minter et al., 1982): net total revenues to total revenues; net educational and general revenues to total educational and general revenues; net auxiliary enterprise revenues to total auxiliary enterprise revenues.

The evaluation of the financial performance from the point of view of the contribution and demand ratios will permit explanation of the behavior of institutional financial ratios in the manner observed throughout the analysis (Minter et al., 1982).

As for the contribution ratios, they can be calculated from the major sources of educational and general revenues contained in the Statement of Current Funds Revenues, and Other Changes (Minter, et al., 1982). In all cases, the contribution constitutes a percentage of total educational and general expenditures and mandatory transfers (Minter et al., 1982).

For the assessment of financial performance from the point of view of the demand ratios, the data necessary for the calculation may be obtained from the eight functional categories of educational and general expenditures as shown in the Statement of Current Funds Revenues, Expenditures and Other Changes (Minter et al., 1982). In all cases, the results are expressed as percentages of total educational and general revenues (Minter et al., 1982).

The evaluation of creditworthiness will determine the ability of the institutions to repay their debts. Thus, strengths and weaknesses related to the vulnerability of the financial solvency of these institutions can be appraised. Therefore, for the evaluation of the capability of the institutions to repay their debts and the measurement of the degree of risk, the use of two financial ratios and two nonfinancial indicators is suggested. Accordingly, the financial analysis measures will be (Minter, et al., 1982):

- total assets to total liabilities (equity ratio);
- debt service to current funds revenues; and net investment in plant to plant debt (plant equity ratio);
- student matriculants to completed applications;
- opening fall FTE enrollment of the present year compared to opening fall FTE enrollment in base year.

The measure of enrollment is important because serving students is the primary objective of higher education. Furthermore, total enrollment is a critical indicator of the financial viability of most higher education institutions. The creditor is basically concerned with data related to total enrollment; components of enrollment (full time, part-time, resident and nonresident students;

undergraduates; graduate and professional degrees granted); and the overall trends and patterns in enrollment (Minter et al., 1982).

Analysis of trends in the financing of higher education institutions can be done by time-series analysis, which permits the observation of the behavior of the financial data over an extended period of time (Lapin, 1982). The arrangement of the data in a time series is suggested by Dickmeyer and Hughes (1982b) for trend analysis of financial health of higher education institutions. This kind of analysis was successfully performed by O'Neill (1971) in a study prepared for the Carnegie Commission on Higher Education in relation to trends in inputs and outputs of higher education from 1930 to 1967. Therefore, the analysis of trends in the financing of higher education institutions permits the measurement of trends in institutional revenues in conjunction with the variables related to these revenues, such as enrollments, student costs, assets, liabilities, working capital, surpluses or deficits, institutional expenditures (educational and general expenditures and mandatory transfers), Consumer Price Index, Higher Education Price Index, and the Gross National Product (Dickmeyer & Hughes, 1982b).

Population

The population consists of four private universities of the Consortium of Universities of the Washington, D.C.

Metropolitan Area: The American University; The Catholic University of America; The George Washington University; and Georgetown University. The reasons for the selection of these institutions as subjects of the proposed study are the following:

1. The procedure will permit the collection of information on peer group institutions for comparative purposes (Dickmeyer & Hughes, 1982a).
2. The four universities to be studied can be considered representative of the private universities in the Washington, D.C. Metropolitan Area.
3. The individual and aggregate statistics of these institutions will permit the determination of strengths and weaknesses in the financing of private higher education in the Washington, D.C. Metropolitan Area.
4. Aggregate financial statistics for this group of institutions can be established for comparative purposes with other peer institutions in the United States.

Data Collection

The financial data to be collected for the purposes of this study basically consists of public information from the following sources:

Financial Statements: (a) Audited balance sheets, (b) current fund revenues, expenditures, and (c) the statement of changes in fund balances and trends observed in the data (Dickmeyer & Hughes, 1982b). These data are available through the special library collections of The George Washington University and Georgetown University and the university archives of The American University and The Catholic University of America.

Other Institutional Data: Nonfinancial statistics, such as full-time-equivalent enrollment and faculty will be obtained from the institutional research offices of the institutions to be surveyed in this study.

Other Information Sources

Inflation Measures for Schools and Colleges (Halstead, 1983) will provide the information related to the Higher Education Price Index (HEPI), Consumer Price Index (CPI), Private Higher Education Tuition Prices and family income. The International Economic Indicators (U.S. Department of Commerce [Eds] 1982-84) will provide the information related to the gross national product.

DEFINITION OF TERMS

For the purposes of this study the following terms are defined:

- Consortium of Universities of the Washington, D.C. Metropolitan Area: A cooperative agreement existing among The American University, The Catholic University of America, Gallaudet College, The George Washington University, Georgetown University, Howard University, Mount Vernon College, Trinity College, and The University of the District of Columbia for the development of higher education activities.
- Financial Condition: The financial position of the institutions to be studied at a given time as shown by their balance sheets (Minter, 1980; Minter et al., 1982).
- Financial Performance: The financial results of the institutions to be studied in relation to their balance between their revenues and expenditures (Minter et al., 1982).
- Creditworthiness: The ability of the institutions studied to repay their debt and assume further indebtedness (Minter, 1980; Minter et al., 1982).
- Financial Structure: All the components of the institutions to be studied that can be expressed in monetary terms. These terms embrace all the items contained in the audited financial statements of the participating universities.
- Full-Time Equivalent (FTE): A unit for counting students or faculty members. Full-time persons

are each counted as one and part-time persons as appropriate fractions of one; for example, two half-time persons equal one full-time equivalent (Bowen, 1981).

- Student Cost/Unit Cost: Cost or expenditure per student in terms of full-time equivalent student (Bowen, 1981).
- Financial Statements: All the reports that summarize the financial condition or final results of the private universities to be studied on any date or for any period (Giordano, 1981). The financial reports specifically will be the statements of revenues, expenditures, and other changes as well as the balance sheets (Dickmeyer & Hughes, 1982).

LIMITATIONS

A serious limitation to this study is the lack of reliable national standards by which a basis of comparison to the results of this study can be made. National financial ratios have not yet been determined and the comparison is restricted to results obtained from previous research done in this field using various institutional groupings.

Another limitation is that often restricted and unrestricted funds are mingled, thus causing a lack of differentiation when reported as line items in institutional balance sheets (Wilkinson, 1979). Also, in the listing of assets the use of market value or book value may cause over- or underestimation of some asset items (Minter, et al., 1982). Then, too, comparisons among institutions are limited by the factors of size, scope, and reputation (Hyatt & Thompson, 1980; NACUBO, 1980).

Finally, the financial condition of an institution lies in many intangible factors that are not possible to express in monetary terms. For example, the survival and progress of a higher education institution also depends on factors such as capacity to attract students; latent ability to raise funds; quality and loyalty of faculty and staff, quality, commitment, and efforts of board and managers; public reputation; program excellence; adaptability to changing social conditions that may affect the educational mission and methods; physical plant condition; and efforts of constituencies to face emergencies. Such intangible factors are not adequately appraised if measured in terms of dollars (Minter & Bowen, 1980).

DELIMITATIONS

This study is limited to the analysis of the financial operations of four private universities of the Consortium of Universities of the Washington, D.C. Metropolitan Area between 1973-74 and 1982-83. Therefore, the information needed for this purpose will be limited to the annual reports of the institutions to be studied corresponding to the time period indicated above. Nevertheless, other sources of information will be used to obtain the information related to national statistics for trend analysis between 1973-74 and 1982-83.

ASSUMPTIONS

The proposed study will be carried out based on the following assumptions:

1. The information to be collected is valid and reliable.
2. The nature of the study will prompt a high degree of cooperation among the providers of the information.
3. The different categories assigned to the financial and nonfinancial items by each institution participating in the study will not cause any serious problems of noncomparability for the data results and subsequent analysis.
4. The institutions to be studied are representative of the private universities of the Washington, D.C. Metropolitan Area.

CHAPTER II

REVIEW OF LITERATURE

Increasing interest in the study of the finance of higher education institutions has been precipitated by problems of financial exigencies in nearly all higher education institutions but especially those in the private sector. This, in turn, has fostered the search for methodologies that help to detect and prevent causes of financial imbalances and deterioration.

The development of approaches to evaluate the financial condition of private and public higher education institutions has contributed to the enrichment of literature related to higher education finance in general. And the analysis of problems causing financial difficulties in private institutions of higher education has been facilitated by the application of financial analytical techniques developed as a result of the research undertaken at the national level.

Accordingly, this review of the literature has been structured as follows:

- Historical synopsis and the present context for financing private higher education in the United States.

- Recent trends in enrollment revenues and expenditures.
- Components of the financial structure of private higher education institutions.
- The role of financial reporting in financial analysis and management.
- Analytical tools for financial assessment of institutions of higher education.

FINANCING OF PRIVATE HIGHER EDUCATION IN THE UNITED STATES

Historical Synopsis

Higher education in the U.S. has been plagued by financial problems since the founding of Harvard College in 1636 (Millet, 1974). Despite the private character of higher education in colonial times, the early college heavily depended on public subsidies as a revenue source (Brubacher & Rudy, 1976). Other revenue sources comprising colonial colleges were the consequence of individual campaigns conducted by these institutions to overcome persistent financial dilemmas (Brubacher & Rudy, 1976). Promotional attempts to obtain funds from England were routinely undertaken, an example of which is the pamphlet "New England's First Fruits" (Brubacher & Rudy, 1976) that contributed to produce gift revenues from abroad.

Endowments derived from American sources constituted another source of revenue. And finally, a significant portion of the colonial college budget was covered by tuition and fees (Brubacher & Rudy, 1976).

Most of these colonial college funds were used to finance current expenses--mainly payment of faculty salaries. At one point, Brown University was given an indirect subsidy by colonial charter to compensate for low faculty salaries in the form of a tax exemption. In fact this former medieval custom was also extended for a time to William and Mary and Harvard as well. At Brown the blanket tax exemption was modified in 1863 to extend to a maximum of $10,000 of real estate, which lasted until after World War II, when the college voluntarily asked the state legislature to end it (Brubacher & Rudy, 1976).

The colonial colleges were not able to accumulate a significant level of permanent funds because their revenues were scarcely enough to cover their current expenses. In fact in many cases the permanent funds were used to finance current deficits, to compensate for mismanagement, and even for personal loans (Brubacher & Rudy, 1976).

The growth of the high school student population during the first five decades of this century, spurred by the general population growth, stimulated the growth of higher education at all levels. For example, between 1900 and 1940, the population as a whole rose 60 percent, while the high school population increased 1,200 percent. As a consequence of this growth, higher education required more financial resources to meet the increasing demand for places for those willing to attend college. Endowments, taxes, and tuition continued to be the three principal income sources of higher education institutions (Brubacher & Rudy, 1976).

For private institutions, endowment income represented the main source of funds. Previously, large gifts were granted to institutions of higher learning between the Revolutionary and Civil Wars. Universities such as Johns Hopkins, Stanford, and Chicago benefited from these acts of philanthropy. Foundations like Carnegie, Rockefeller, and Ford donated a portion of their revenues and eventually their principal to help to solve financial problems afflicting older institutions (Brubacher & Rudy, 1976).

Millet (1974) compared the financial statistics of institutions of higher education for the fiscal years 1950 and 1974 and found little change during this period in the pattern of expenditures. For example, the expenditures for instruction were about 65 percent of the total expenditures in 1950 compared to 66 percent of total expenditures in 1974. The expenditures for sponsored research and public service did not show significant proportional differences between these years; nevertheless, Millet detected a shift in the income source for colleges and universities. The proportion of all student-derived revenue decreased from 25 percent to 21 percent, which Millet attributed to the shift in enrollment from private to public institutions from 1950. About 52 percent of the total student enrollment was in public institutions of higher education while 48 percent were in private institutions. By way of contrast, fall 1973 data showed the proportion of enrollments at about 76 percent for public higher education institutions versus 24 percent for private institutions. State government support for higher education institutions between 1950 and 1974 rose from around 19 percent to approximately 37 percent.

Millet (1974) observed a substantial reduction in the proportion of institutional revenues derived from the Federal government. This change is attributed to the fact that the tuition charges for World War II veterans enrolled in higher education institutions in 1950 were paid directly to the institutions by the Federal government. However, by 1974, the government was paying educational benefits directly to veterans and survivors under the Social Security System, which then gave the veterans and not the institution control over the flow of revenue.

In terms of dollars, the contribution of the Federal government for higher education institutions was about seven times greater in 1974 ($3.7 billion) than in 1950 ($500 million), while the contribution of state governments was some 20 times greater in 1974 ($11.4 billion) than in 1950 ($450 million). Other sources of income, such as endowments, gifts, and auxiliary charges decreased in the proportion of contribution in the period analyzed by Millet (1974).

Furthermore, Millet (1974) reviewed four major issues he considered basic concerns of those who support the mission of higher education in the U.S. These issues were:

(1) the costs of higher education; (2) the relative pricing of public and private institutions; (3) the choice between financing students or financing institutions; and (4) the possibility of further changes in the sources of revenues for colleges and universities.

Millet (1974) found the costs of higher education would have difficulty keeping pace with inflation, which would be determined by the future decrease in the purchasing power of 1971 dollars. He also observed a gap between the tuition charges of private and public higher education, i.e., private higher education tuition is much more expensive than public higher education. Then, too, there was a significant difference between governmental support of students and governmental support of institutions. Increased public spending for financial assistance to students, Millet maintained, would not increase the revenues to a college or university unless the institution increased either its enrollment or its tuition charges. Finally, to deal with the effects of inflation and to attain improvement in quality, higher education institutions would need additional income. This additional income, in Millet's opinion, would have to be derived from the three traditional sources of income: government, students, and philanthropy.

For consideration of these issues it is necessary to recall that higher education expenditures rose approximately 13 times between 1950 ($2.3 billion) and 1974 ($29.5 billion). Over this same time, enrollment rose about three times and the Consumer Price Index (CPI) increased approximately 90 percent. Therefore, even when adjusted in relation to the CPI, the expenditures still underwent an increase of some 6.5 times in contrast to the higher education expenditures of 1950 (Millet, 1974). The cost per FTE student was $786 in 1950 (Bowen, 1981) but $2,759 in 1974 (Halstead, 1983), an increase of about 3.5 times in current dollars.

In 1950, private colleges and universities as a group began to lose enrollments. Between 1965 and 1970 the enrollment expansion slowed by 2 percent in private institutions. This decrease in enrollments was caused by the tremendous increase in public education facilities as well as the low tuition charges at these institutions (Millet, 1974).

Analyzing the financial statistics of higher education between the late 1950s and 1967-68, Cheit (1971) concluded that mere growth of a higher education institution was not a good indicator of financial strength. Doubled enrollments, tripled expenditures, and fourfold increases in expenditures for the physical plant during those years seemed a positive sign for institutions of higher education, but the financial structure of many of these institutions showed remarkable weaknesses. Cheit stated:

> Despite the growth, however, the fiscal structure of many institutions was not sound. There were problems of inadequate plants remaining from the Great

> Depression and World War II. Much of the library, laboratory, space, and equipment support needed for new programs was either not found or financed by heavy dependence on foundation and government assistance of an explicitly temporary nature. There was neither budget nor plan for permanent financing in the event of a downturn. Some institutions adopted new graduate programs without realizing how much it would cost to carry them on at their desired level of quality. Where plant expansion was financed, long-term maintenance and equipment replacement (sometimes only five years for scientific equipment) often was not done. It was a time of competition for quality resources in the face of a generally rising price level. Many institutions were "trading up" in quality and getting caught by high expenses of transition. Some of the university administrators, who were aware during that time of the dangers of undercapitalization and overextension, either could not deflate the boom psychology on their campus or were willing (or forced) to gamble that subsequent income would be found to bail them out (pp. 5-6).

O'Neill (1973) analyzed the trends in funding for colleges and universities between 1930 and 1968. From his findings O'Neill suggested several reasons why private higher education institutions have increased their dependence on tuition derived revenues:

- Less than adequate increases in private philanthropy. The decline in the rate of private philanthropy affected private higher education institutions more than the public ones.
- Rapid increases in student aid derived from the Federal government possibly caused tuition increases as well as the increase in dispersion of charges among students according to income.
- Private higher education institutions may have emphasized the subsidy of activities different from student instruction. And federal payments for financing research were slowing down.

Bowen (1981) explored the long-term trends in the expenditures of higher education institutions between 1929 and 1976, and arrived at the following conclusions:

First, higher education expenditures at the national level increased at the rate of 9.6 percent annually. Bowen believed most of this growth was due to a vast rise in student enrollment and a concomitant decline in the value of the dollar.

Second, the trends in the amounts of the cost per student were not consistent with growth. He identified three stages of trends in educational expenditures per student:

- Slight decline: from 1929-30 to 1949-50 the average annual percentage of change was -0.40 percent. The emphasis of the expenditure was mostly on organized research, public service, and other purposes not directly related to the education of students.

- Rapid growth: from 1949-50 to 1969-70 the average annual percentage of change was +3.21 percent. This positive change can be attributed to the national interest in the improvement and expansion of higher education.
- Slight decline: from 1969-70 to 1977-78 the average annual percentage of change was -0.36 percent. This decline can be attributed to a correlated insufficiency of funds for the steady support of the educational expenditures per student.

Third, during the past 50 years, the enrollment of private higher education institutions expanded slower than that of public institutions. This fact has meant that the operating costs per student of private institutions are higher than in the public institutions. The relative increase in enrollments counterbalanced some of the factors influencing the increase of the average expenditures per student.

Fourth, the rate of growth of the trends in unit costs of higher education was greater than in most of the goods-producing sectors and a segment of the service sector. However, this rate of growth was less than in some of the nonprofit professional industries, such as elementary and secondary education, government, and hospitals.

Fifth, the three-stage pattern of the trends in the unit costs, already mentioned in the second conclusion, seems not to be common to other industries. These industries have been affected by more steady cost increases over long periods.

Sixth, the salary levels of faculty and staff have influenced the trend of unit costs in higher education. A decline in cost per student may be produced by a decrease of faculty and staff salaries.

This historical perspective permits the identification of key factors causing financial difficulties in the financial resources of higher education institutions to keep pace with costs. The basis for financial trouble has been increasing for a long time. The Vietnam War and its related inflation raised the prices of many major institutional costs and services. And the increasing competition for Federal and state funding has deteriorated research universities and public institutions. On the other hand, private institutions must deal with market problems related to increases in tuition charges (Balderston, 1978).

In summary, the finance of higher education cannot be studied without considering the political, social, and economic environment in which the institutions of higher education perform. The history of financing higher education in the U.S. suggests the following factors should be considered in the policymaking and decisionmaking process:

1. The attitude of the government at the federal, state, and local level towards the financial problems of both public and private institutions of higher education must be taken into account.
2. The behavior of the providers of endowment funds and philanthropic gifts as related to their significant financial support to private universities must be carefully appraised.
3. The financial resources of the students and their families to afford the increasing tuition charges, especially in private colleges and universities should be projected.
4. The overall condition of the economy of the country is a crucial factor. This factor compels institutions of higher education to take the necessary and often painful steps to counteract the impact of inflation on the costs of goods and services related to higher education.

Current Trends

The steadily rising operating costs of higher education institutions require increased revenues from government, philanthropy, and tuition charges. Faculty salaries, professional service expenditures, and the purchase of goods and services rose faster than inflation between 1961 and

1974. The Higher Education Price Index (HEPI), which measures the effect of inflation on the current operations of higher education institutions, was 77.7 in 1961 and 152.8 in 1974. This increase of 96.7 percent in the price of the current operations of higher education was greater than the increase in prices of the general economy, which was 56.7 percent as measured by the Consumer Price Index (Halstead, 1975).

Between 1961 and 1981, the price of financing higher education operations increased significantly. The HEPI went from 77.7 in 1961 to 263.9 in 1981. Since 1973, the inflation rate has ranged from 5.3 percent to 7.95 percent per year.

In contrast to the analysis of the 1961 to 1974 trends (Halstead, 1975), which reflected inflation rates in higher education prices (according to the HEPI) greater than the inflation rates of the general economy (according to CPI), the trend between 1974 and 1981 showed inflation in higher education prices (according to HEPI) rose at the same rate. Thus, the impact of inflation was similar both for the general consumer and for higher education institutions. The CPI had an increase of 191 percent ($\frac{263.1}{90.5}$ x 100), the HEPI experienced an increase of 240 percent, and faculty salaries rose 197 percent ($\frac{218.5}{73.5}$ x 100) (See Table 1) (Halstead, 1983).

The price indices applied by Halstead (1983) to the trends in higher education prices also include a faculty salary price index, a tuition price index, and a family

Table 1

Summary of Price Indices for Current Operations in Higher Education, General Consumer, Faculty Salaries, Student Tuition, and Family Income, Selected Years 1961-1982

1967 = 100

	HEPI	CPI	Student Tuition Public	 Private	Faculty Salaries	Family Mean Income
Fiscal Year	Index	Index	Index	Index	Index	Index
1961	77.7	90.5	72.5	65.3	73.5	72.3
1967	100.0	100.0	100.0	100.0	100.0	100.0
1973	143.0	130.0	--	--	137.4	151.9
1974	153.1	141.6	158.3	165.6	144.4	162.6
1981	263.9	263.1	250.6	302.3	218.6	282.2
1982	290.1	285.9	268.0	349.8	236.9	--

From Inflation Measures for Schools and Colleges. (pp. 103-104) by D. K. Halstead, 1983; Washington, D.C.: The National Institute of Education.

median income index. These indices permit the estimation of the effect of inflation on faculty salaries, tuition charges for public and private institutions, and family income. Table 1 compares the CPI and the HEPI for the selected time periods 1961-74, 1974-82, and 1961-82, with the trends in faculty salaries, student tuition, and family income. The percentage of change is shown in Table 2.

In the analysis of these data, Halstead (1983) found great differences in the trends according to the yearly inflation rates. Consumer prices were increasing about 1 percent annually, faculty salaries were increasing about 5 percent a year, while the inflation for institutions was rising at a rate of 4 percent a year. From 1965 to 1977 consumer prices grew to the present double-digit level. According to Halstead, the Consumer Price Index was 285.9 in 1982. (Table 2 shows the changes in this index from 1961 to 1982.)

The relationship among the percentages of change, computed according to the trends in Halstead's price index data (Halstead 1983), shows that tuition prices of private institutions for the three selected periods (see Table 2) have increased faster than family income, faculty salaries, the Higher Education Price Index, public higher education, and prices in the general economy. O'Neill (1973), analyzing the trends in tuition between 1953 and 1968, found that tuition increased by 4 percent a year, or at almost three times the rate of the Consumer Price Index, which rose 1.7

Table 2

Summary of Percentages of Change in Higher Education Price Index (HEPI), Consumer Price Index (CPI), Faculty Salary Index, Student Tuition Index, and Family Median Income Index, Selected Years 1961-1982

Time Period	HEPI %	CPI %	Student Tuition Public %	Student Tuition Private %	Faculty Salary Index %	Family Median Income %
1967-74	97.0	56.5	118.34	153.6	96.5	124.9
1974-82	89.5	101.9	69.3	111.2	64.1	73.6*
1961-82	273.4	215.9	269.7	435.7	222.3	290.3*

* Family median income data is available until 1981.

Percentage of changes computed with data from: Inflation Measures for Schools and Colleges. (pp. 103-104) by K. Halstead, 1983; Washington, D.C.: The National Institute of Education.

percent a year during this same time period. Family income increased faster than tuition and the Consumer Price Index by 5.5 percent during this same period.

According to the trends in prices between 1971 and 1982 (see Table 2), tuition in private higher education institutions increased faster than tuition in public institutions, the cost of goods and services of higher education institutions, faculty salaries, family median income (1974-81), and the prices of the general economy.

This significant growth in the rate of tuition increase is attributed by Halstead (1983) to the efforts made by the institutions to counteract the effect of the increase in prices for many goods and services colleges and universities must purchase. Thus, an approach to this problem was to reduce the rate of faculty salary increase from 7 percent in 1970 to between 4 and 6 percent annually between 1971 and 1979. This measure produced changes in the yearly increase of the Higher Education Price Index, which has remained below that of the Consumer Price Index since 1973-74. In addition, cost increases in higher education institutions since 1970 have been transferred to the student consumer as well as to state and local governments.

This significant increase in tuition can be explained by the tendency of all higher education institutions to depend on the same revenue structure of tuition, government support, gift income, and endowment income. The difference is determined by the proportion that each of these elements participate in these revenue sources. The typical private higher education institution depends on tuition for about 60 percent of its educational and general revenues and the average public institutions for about 20 percent. Obviously, this dependence on higher education tuition makes the institution more sensitive to the enrollment levels (Ramsden, 1978) and to changes in other sources of income such as private philanthropy, government derived student aid (O'Neill, 1973), and the subsidy of activities other than instruction (Bowen, 1981; O'Neill, 1973). Even public institutions have experienced substantial increases in tuition charges as a consequence of inflation. Between 1961 and 1984, tuition in public institutions rose faster than faculty salaries and prices in the general economy.

For public and private higher education, the role of government at all levels in the financing of higher education can be regarded as a crucial factor for institutional revenue flow (Halstead & McCoy, 1979; NCES, 1983; Ramsden, 1978). Halstead and McCoy (1979) stated:

> State and local governments are the single most important source of financial support to American higher education. Of the $31 billion in education and general (E&G) revenues received by all colleges and universities in fiscal year 1976, $14 billion or 45 percent came from state and local government appropriations and

> grants and contracts. Tuition at $8.2 billion and Federal appropriations and contracts at $5.4 billion were next in importance. In the public sector, state and local governments completely dominate, providing 60 percent of total E&G revenues received by public colleges and universities (p. 1).

Finally, the relationship between the GNP and higher education growth and welfare cannot be ignored. Bowen (1981) in the analysis of higher education trends from 1929 to 1976 emphasized the phenomenal growth of higher education since World War II. This growth began an increase in the total higher education expenditures of 9.6 percent per year. The expense share of the GNP corresponding to higher education increased from 0.7 percent to 2.7 percent during the period considered by Bowen. Higher education institutions began to change their traditional revenue structure (government appropriations, endowments, gifts, and tuitions) to raise the necessary funds to keep pace with general economic growth. New financial resources such as government grants, student loan funds, and stepped-up annual giving programs became a central part of institutional financial framework.

The association of higher education expenditures and student enrollment to the GNP in the 1980s has been commented on by Bowen (1981): "Indeed, if in the 1980s there should be a fall in enrollment or even a slowing of enrollment growth, higher education's share of the GNP might actually begin to decline." (p. 36.)

The GNP is the basic measure of the economic growth of a given country (Lapin, 1982). As a representation of the value of goods and services, it can be compared to the growth in the prices of consumption of goods and services, including higher education prices (Hughes, 1979). However, the use of the GNP presents some limitations when used in the analysis of trends in financing higher education institutions. According to the Department of Commerce statistics ([Eds] 1982-1984), the GNP rate of increase has been fluctuating, while the rate of growth of the HEPI, CPI, tuition, family income, and faculty salaries show a steady increase (Halstead, 1983). Moreover, this fluctuating rate of increase, an average of 2.8 percent, at constant 1972 prices for the time period 1976-83 and its price measure, the GNP Implicit Price Deflator [GNPIPD] (Department of Commerce [Eds] 1982-84) have proven to be less than the rate of inflation (see Table 3) (Hughes, 1979) even when spliced at 1967 prices.[1]

Table 3 shows the data corresponding to the trends in the GNP. The figures corresponding to these trends in 1972 prices have been spliced at 1967 prices through the Spliced Price Index (Lapin, 1982). This procedure permits establishing a uniform base year (1967 = 100) (Halstead, 1983)

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[1] Splicing is the combination of two-index number time series with different base years (Lapin, 1982, p. 458).

Table 3

Gross National Product (GNP) at Current Prices and Constant 1967 Prices, Gross National Product Inplicit Price Deflator (GNPIPD) 1967 = 100, GNPIPD 1972 = 100, Spliced GNPIPD 1967 = 100, GNPIPD Percentage of Change (1967 = 100), Years 1967-83

	in Billions of Dollars					
Year	1 GNP Current Dollars	2 GNP Constant 1967 Dollars	3 GNP IPD 1967 = 100	4 GNP IPD 1972 = 100	5 Spliced GNPIPD 1967 = 100	6 Yearly Percent of Change 1967 = 100
1967			100.0	79.0	100.0	
1968			103.7	--	103.7	3.7
1969			109.3	--	109.3	5.4
1970	993	867	114.5	91.4	114.5	4.8
1974	--	--	141.7	--	141.7	23.8
1975	--	--	156.9	--	156.9	10.7
1976	1,718	1,023	167.9	132.3	167.9	7.0
1977	1,918	1,070	119.2	140.0	179.2	6.7
1978	2,164	1,129	191.6	150.4	191.6	6.9
1979	2,418	1,169	--	163.4	206.8	7.9
1980	2,633	1,116	--	178.4	225.8	9.2
1981	2,954	1,196	--	195.1	247.0	9.4
1982	3,073	1,173	--	206.9	261.9	6.0
1983	3,310	1,213	--	215.6	272.9	4.2

The data in columns 1 and 4 for the years 1970-83 are from U.S. Department of Commerce International Economic Indicators. Dec. 1982, pp. 9, 42; June 1983, pp. 9, 42; and March 1984, pp. 9, 42; Washington, D.C.
The GNPIPD 1972 = 100 for the year 1967 is from Statistics for Modern Business Decisions p. 454, by L. Lapin, 1982, New York: Harcourt Brace Janovich, Inc.
The data in column 3 are from Inflation Indicators in Research Universities by K. S. Hughes, 1979 NACUBO, Writers on Financial Management. p. 183, Washington, D.C.: NACUBO.
The data in columns 4 (for the years 1979-83) and 5 were computed by the author.

for comparative purposes to analyze trends in the economic indicators considered here.

Table 4 shows the data corresponding to the trends in changes of the CPI, HEPI, private institutions tuition price index, public institutions tuition price index, family median income index, and faculty salaries index.

Recent Trends in Private Higher Education Enrollments, Revenues, and Expenditures

Enrollment Trends

Student enrollment is one of the core statistics in the determination of institutional risk (Dickmeyer, 1982; Dickmeyer & Hughes, 1982). Consequently, preserving adequate enrollment levels is vital for the financial survival of private education institutions where tuition is one of the most important sources of revenue (Cheit, 1971; O'Neill, 1973; Halstead, 1983).

By analyzing the effects of changes in enrollment levels and inflation on general and educational expenditures it is possible to establish a framework for trend analysis in relation to total revenue and expenditures (Halstead, 1983).

Kotler (1982) attributes the causes of a future decline in enrollments at private universities to: (1) a 20 percent to 30 percent decline in the numbers of high school graduates between between 1980 and 1990: (2) decline in the

Table 4

Trends in Higher Education Prices of Goods and Services as Measured by the Higher Education Price Index (HEPI), Public and Private Higher Education Tuition as Measured by the Public and Private Higher Education Indices, Faculty Salaries as Measured by the Faculty Salaries Index, Consumer Prices as Measured by the Consumer Price Index (CPI), and Family Income as Measured by the Family Median Income Index, Years 1973-82.

1967 = 100

Years	HEPI	Tuition		Faculty Salaries	CPI	Family Median Income
		Private	Public			
	Index	Index	Index	Index	Index	Index
1973	143.0	--	--	137.4	130.0	151.9
1974	153.1	165.6	158.3	144.4	141.6	162.6
1975	166.2	176.3	168.6	152.3	157.4	172.9
1976	177.2	192.0	180.4	161.1	168.5	188.6
1977	188.7	208.9	188.3	168.7	178.3	201.8
1978	201.3	226.2	205.2	177.6	190.3	222.4
1979	216.9	245.1	219.4	187.9	208.1	247.8
1980	238.3	267.6	233.6	201.3	235.9	265.0
1981	263.9	302.3	250.6	218.6	263.1	282.2
1982	290.1	349.8	268.0	236.9	285.9	--

Note: From Inflation Measures for Schools and Colleges. (pp. 14-15), by D. Kent Halstead, 1983; Washington, D.C.: U.S. Department of Education.

proportion of high school students willing to attend college; (3) the increase of enrollments in community colleges; (4) the trends in the increase of the level of tuition will contribute to reduce the demand for higher education, particularly in private institutions; (5) college revenue from tuition and fund-raising tend to grow slower than college operating costs.

The report by the Carnegie Council on Policy Studies in Higher Education (1980), Three Thousand Futures forecasts a 5 percent to 15 percent decline by the end of the century as a consequence of a decrease of the number of 18 to 24 year-olds. Bowen (1981), who disagrees with this prediction, stated:

> To speak of higher education as a growth industry at the brink of a decline in the number of persons between the ages of eighteen and twenty-one may seem absurd. But the potential students are of all ages. The number of people who could benefit from higher education is enormous. To cite a few figures, only 17.5 million person or 14.7 percent of the adult population (twenty-five years of age and over) are college graduates; another 15.5 million have attended college without graduating; and 85.8 million over the age of twenty-five, or nearly three-fourths of the adult population have never been to college. Even in the group of eighteen to twenty-four, only about half ever attend and only a fourth ever graduate from college. There are vast numbers of persons who are potential

> candidates for further higher education. The numbers are so large that only small changes in the percentages attending would make enormous differences in enrollment. For example, each increase of one percent in the number of persons over the age of twenty-four attending college would add a half-million full-time equivalent enrollments (p. 250).

Besides the decline in the traditional market of 18 to 24 year olds and a decline of 19 percent in the college-going population, Hershey (1981) emphasized the impact of the patterns of federal spending on enrollment levels. Hershey stated:

> Increased federal controls, such as legislation for veterans and handicapped, will also affect enrollments. To determine where federal dollars will be spent, the government will become involved in institutional eligibility and accreditation (p. 77).

Among other causes influencing future enrollment levels (Hershey, 1981) are the selection of programs to be offered as a consequence of cost effectiveness of such programs; the reluctance of the institutions to reduce their autonomy as a consequence of the increase in state financial support; and the lack of an effective management plan that acknowledges the interrelation of enrollment, marketing and retention.

However, the expected decline in enrollments has not happened yet. Minter and Bowen (1975, 1977, 1978, 1980), after analyzing the trends in enrollments of private higher education, found that from 1969-70 to 1979-80 total enrollment remained relatively stable, and even showed a slow upward trend. Yet Minter and Bowen (1978, 1980) considered uncertain the overall enrollment situation due to the demographic changes foreseen for the 1980s. Despite this uncertainty over enrollments, Bowen and Minter recognize that the private higher education institutions in general at the beginning of the 1980s showed a stable number of students with similar academic preparation as in previous years (Minter & Bowen, 1980).

According to NCES (1984), slow but steady growth has occurred in total enrollments at both public and private higher education institutions. Enrollments rose from 9,602,123 students in 1973 to 12,425,780 students in 1982, an increase of 29.4 percent. The public sector increased its total enrollments from 7,419,516 students in 1973 to 9,696,087 students in 1982, an increase of 30.7 percent, while private sector enrollments rose from 2,182,607 students in 1973 to 2,729,693 students in 1982, an increase of 25.1 percent. Table 5 shows these trends along with the percentage of public and private total enrollments related to the trends in total higher education enrollments between 1973 and 1982. The rates of enrollment growth for both types of institutions are also shown in Table 5. The average rate of growth of enrollment for public institutions was 3.1 percent and for private institutions 2.5 percent.

Table 5

Total Enrollments in Public and Private Institutions of Higher Education and Percentage of Changes in Enrollment Years 1973 to 1982

	Total Enrollments					Percentage of Change		
	1	2		3		4	5	6
	Total	Public Institutions		Private Institutions		Total	Public Institutions	Private Institutions
Years	No. of students	No. of students	%	No. of students	%	%	%	%
1973	9,602,123	7,419,516	77.3	2,182,607	22.7	--	--	--
1974	10,223,729	7,988,500	78.1	2,235,229	21.9	6.5	7.7	2.4
1975	11,184,859	8,834,508	79.0	2,350,351	21.0	9.4	10.6	5.1
1976	11,012,132	8,653,477	78.6	2,358,660	21.4	-1.6	-2.0	0.3
1977	11,285,787	8,846,993	78.4	2,438,794	21.6	2.5	2.2	3.4
1978	11,260,092	8,785,893	78.0	2,474,199	22.0	-0.2	-0.7	1.4
1979	11,569,899	9,036,822	78.1	2,533,077	21.9	2.7	2.9	2.4
1980	12,096,895	9,457,394	78.2	2,639,501	21.8	4.6	4.6	4.2
1981	12,371,672	9,647,032	78.0	2,724,640	22.0	2.3	2.0	3.2
1982	12,425,780	9,696,087	78.0	2,729,693	22.0	0.4	0.5	0.2

From: "Digest of Education Statistics," 1983-84. National Center for Education Statistics, Washington, D. C., USA.

The total average increase was 3 percent between 1973 and 1982.

In terms of FTE students (NCES, 1984), the total enrollment was 7,453,448 students in 1973 and 9,014,521 students in 1982, an average increase of 20.9 percent. The FTE enrollment in public institutions was 5,629,555 students in 1973 and 6,781,300 students in 1982, an average increase of 20.4 percent. For private institutions the FTE enrollment was 1,823,893 students in 1973 and 2,233,221 students in 1982, an increase of 22.4 percent. Table 6 shows the trends in FTE enrollments and the rates of increase for total FTE enrollment and FTE enrollment in public and private institutions of higher education. The average rate of growth for public institutions was 2.4 percent and for private institutions 2.6 percent, with a total average increase of 2.4 percent.

According to the above statistics, higher education institutions have experienced a slow but steady increase in their enrollments in both the public and private sector between 1973 and 1982. In terms of total enrollment, the public sector increased its enrollments 5.6 percent greater than the private sector; however, in terms of FTE students, the enrollment in private institutions rose 2 percent faster than public institutions. The private sector, even though showing a slower growth rate, showed a steadier increase than its public sector counterpart.

Table 6

Total FTE Enrollments in Public and Private Institutions of Higher Education and Percentage of Changes in Enrollment Years 1973 to 1982

	FTE Enrollments					Percentage of Change		
Years	1 Total FTE students	2 Public Institutions FTE students	%	3 Private Institutions FTE students	%	4 Total %	5 Public Institutions %	6 Private Institutions %
1973	7,453,448	5,629,555	76.4	1,823,893	23.6	--	--	--
1974	7,805,453	5,944,804	76.1	1,860,649	23.9	4.7	5.59	2.02
1975	8,479,685	6,522,310	76.9	1,957,375	23.1	8.6	9.7	5.2
1976	8,312,502	6,349,903	76.4	1,962,599	23.6	-2.0	-2.6	0.3
1977	8,415,339	6,396,476	76.0	2,018,863	24.0	1.2	0.7	2.9
1978	8,348,482	6,279,199	75.2	2,069.283	24.8	-0.8	-1.8	2.4
1979	8,487,317	6,392,617	75.3	2,094,700	24.7	1.7	1.8	1.3
1980	8,819,013	6,642,294	75.3	2,176,719	24.7	3.9	3.9	3.9
1981	9,014,521	6,781,300	75.2	2,233,221	24.8	2.2	2.1	2.6

From: "Digest of Education Statistics," 1983-84. National Center for Education Statistics, Washington, D. C., USA.

Despite the gap existing between the tuition prices in public and private higher education tuition prices, the level of enrollment at private institutions in general has not been affected. Among public higher education institutions, the tuition income per student shows a very stable level of purchasing power from 1961 to 1981. The significant increase in tuition revenue per student in private higher education has more than kept pace with institutional inflation, producing around a 37 percent increase in purchasing power between 1961 and 1981. However, this substantial increase in tuition in private higher education prices is related to the ability of families to afford increased tuition fees: private education was 15.7 percent of family income in comparison to 14 percent in 1961. Thus, the shift has not been that significant during this 20-year period (Halstead, 1983).

Minter and Bowen (1980) found that the slow but steady growth of private higher education enrollments from 1969 to 1980 was caused in part by the practice in many institutions of establishing limits on enrollments to avoid large increases, and, in the face of projected declines, intensifying recruitment efforts to avoid large decreases.

One more factor that might have contributed to enrollment stability is the granting of larger student financial aid and loans with a longer repayment period. The Educational Testing Service (National Association of College and University Business Officers [NACUBO], 1984) found that some students could afford to pay back larger amounts if they were allowed to repay their loans over 15 years. The time currently given to students to repay debts has a 10-year ceiling. The present practice of repaying loans over a 10-year period in equal monthly installments caused some difficulty for some students because the initial installments were greater than the ability of the students to repay immediately after graduation.

The ETS study (cited in NACUBO, 1984) recommended an increase from $5,000 to $16,500 for students pursuing a bachelor's degree, and from $30,500 to $100,000 for students in M.D. programs. The report advised that the extension of the repayment option must be approved by Congress. It is expected that if this new financial mechanism is implemented, it will have a positive effect on enrollments in higher education institutions.

Revenue Trends

The National Commission on the Financing of Postsecondary Education (NCFPE, 1973) conducted an analysis of the revenue sources of higher education institutions at all levels for the years 1971-72. The Commission found that financing of postsecondary education in the U.S. is shared by "students and their families, government at all levels, philanthropic organizations and individuals, and the institutions themselves" (p. 67).

The above paragraph contains a synthesis of the revenue structure of higher education institutions. The elements forming this revenue structure are common to both public and private institutions, and as previously noted, the difference lies in the proportion these elements represent in such a structure. As Ramsden (1978) puts it, "all institutions tend to depend on the same source of revenue sources--tuition, government support, gift income and endowment income. The difference is in the mix."

The discussion of the relative weight of each revenue source within the income structure of private higher education principally focuses on tuition fees, gift income, endowments, and government support, and revenue distribution trends wgucg have been analyzed by Cheit (1971), Millet (1974), and O'Neill (1973). The trends in this revenue structure have always been associated with trends in enrollments, expenditures, and in the general economy of the country, as pointed out previously (Halstead, 1975, 1983; McDonald, 1980; O'Neill, 1973). Related trends such as family income (Halstead, 1983), population size and mix (Bowen, 1981; McDonald, 1980) have been considered important elements in the measurement of the enrollment impact on revenues and expenditures of higher education institutions.

An examination of revenue trends between 1975 and 1982 (NCES [Eds.] 1975, 1977, 1982) shows that the revenue structure of private higher education institutions has remained significantly unchanged. The proportions by which each income source in the revenue structure participates have remained relatively stable when measured on a year to year basis. (Table 7 shows the trends in revenues sources for the years 1975 to 1982.)

A comparison of the revenue structures of the years 1975 and 1982 (see Table 7) shows the proportional changes. Tuition and fees underwent an increase of 1.9 percent; sales and services of educational activities increased by 0.6 percent; sales and services of hospitals increased its proportion by 0.9 percent; and other sources of revenues (unclassified) had an increase of 1.4 percent. The Federal government support decreased in total proportion by 2.6 percent while state government support decreased by 0.3 percent. The contribution of private philanthropy experienced a decrease of 1.1 percent, and revenues from endowment income decreased by 0.2 percent. The proportion of local government support remained stable. The revenues from auxiliary enterprises underwent a decrease of 1.1 percent in relating to total current fund revenues.

Accordingly, the sum of the decreases in the proportion of the Federal and state government support, private philanthropy, and endowment income (4.2 percent) was 0.9 percent greater that the proportion of the sum of increases in student tuition and fees and other unclassified sources of revenues (3.3 percent) for this period. (Sales and services of educational activities, hospitals, and auxiliary enterprises are excluded from this analysis, since they are

Table 7

Current Funds Revenues by Source of Private Education Institutions in the United States - Years 1975-82

In millions of current dollars

	Fiscal Years													
	1 1975		2 1977		3 1978		4 1979		5 1980		6 1981		7 1982	
Sources	$	%	$	%	$	%	$	%	$	%	$	%	$	%
Tuition and fees	4,196	35.7	5,234	36.7	5,713	36.9	6,324	36.5	7,070	35.9	8,203	36.6	9,379	37.6
Federal government including independent operations	2,290	19.5	2,797	19.6	2,929	19.0	3,312	19.1	3,830	19.4	4,207	18.8	4,218	16.9
State governments	250	2.1	298	2.1	315	2.0	346	2.0	404	2.1	430	1.9	452	1.8
Local governments	88	0.7	112	0.7	109	0.7	112	0.6	151	0.8	168	0.8	181	0.7
Private gifts, grants and contracts, and gifts received in the preceding year	1,214	10.3	1,423	10.0	1,544	10.0	1,653	9.5	1,829	9.3	2,077	9.3	2,287	9.2
Endowment income	611	5.2	667	4.7	703	4.5	832	5.0	986	5.0	1,150	5.1	1,353	5.4
Sales and services of educational activities	182	1.5	263	1.8	317	2.0	338	2.0	420	2.1	466	2.1	511	2.1
Auxiliary enterprises	1,535	13.1	1,787	12.5	1,934	12.5	2,113	12.2	2,393	12.2	2,673	11.9	2,999	12.0
Hospital sales and services	1,030	8.8	1,237	8.7	1,409	9.1	1,635	9.4	1,838	9.3	2,083	9.3	2,413	9.7
Other sources	363	3.1	443	3.2	516	3.3	646	3.7	774	3.9	932	4.2	1,128	4.6
Totals	11,759	100.0	14,261	100.0	15,489	100.0	17,311	100.0	19,695	100.0	22,389	100.0	24,921	100.0

From: "Financial Statistics of Institutions of Higher Education" by the National Center for Education Statistics (Eds) 1975, 1977-82, Washington, D. C., USA

Note: The percentages were calculated in relation to the total revenues.

considered self-financed activities [Balderston, 1978; Hughes, Leonard & Williams, 1982; O'Neill, 1973].)

Revenues (financial inflows) and expenditures (financial outflows) make up the financial system of higher education institutions. Either the buildup or reduction of institutional resources is determined by the difference between income and expenditures. When inflows are greater than outflows the institution can augment its investment in resources. Hence, the difference in the financial structure between public and private institutions is determined by the flexibility with which these institutional revenues can be managed. Because public institutions depend more on governmental support than student tuition, they are less able than private institutions to make independent decisions about investments to build up financial reserves (Dickmeyer, 1983).

The accumulation of financial reserves is usually moderate for private as well as public higher education institutions. In this respect, Dickmeyer (1983) stated:

> Both taxpayers and legislators may view financial reserves as evidence of overfunding. Public institutions often must depend on the state for protection from economic fluctuations.
>
> The wealthy institutions. . . [managed]. . . to build resources--they have highly regarded faculty, ample financial reserves, large endowments, and well-

> maintained buildings. Institutions that are unstable financially may have a history of outflows exceeding inflows to the extent that large amounts of debt leave those institutions without net resources (p. 13).

The percentages of change shown in Table 7 represents an increase in revenue source related to the financing educational and general expenditures between 1977 and 1982. Student tuition and fees show a slight growth between 1977 and 1980, and a significant increase in 1981 (16.2 percent). In 1982 this of growth decreased to 14.3 percent; the average rate of growth for 1977-82 was 12.4 percent. The Federal government support through appropriations, grants and contracts and independent operations (NCES, 1983) shows a significant fluctuation at an average rate of increase of 8.7 percent.

Observe that the contribution of the Federal government in conjunction with the other sources of revenue (with the exception of tuition and private philanthropy) shows a significant increase between 1978 and 1980 (see Table 8); however, the increase of the contribution of the Federal government to private higher education was only 0.3 percent between 1981 and 1982. The Federal government, including independent operations, contributed to private higher education 37.5 percent of the total support to higher education in 1975 (NCES, 1975). In 1982 this proportion rose to 44 percent (NCES, 1983).

Table 8

Percentage of Change of Tuition and Fees, Federal, State, and Local Government Support, Private Philanthropy and Endowment Income, Years 1977-82

Years	1 Tuition and fees	2 Federal government	3 State government	4 Local government	5 Private philanthropy	6 Endowment income
	%	%	%	%	%	%
1977	--	--	--	--	--	--
1978	9.2	14.7	15.7	-2.8	8.5	5.4
1979	10.7	13.1	19.8	2.8	7.1	3.6
1980	11.8	15.6	16.8	34.8	10.6	18.5
1981	16.2	9.8	6.4	11.3	13.6	16.6
1982	14.3	0.3	5.11	7.7	10.1	17.7
Yearly average rates of growth	12.4	8.7	8.8	10.8	10.0	12.4

Note: Percentages computed from the data contained in Table 7. The average rates of growth for the 5 year period were computed by dividing the sums of the percentages corresponding to each source of revenue by 5.

contribution to higher education from this source of revenue. However, this proportion has declined in comparison to 1975 levels (NCES, 1975), when the proportion of private higher education in relation to the total support to public and private higher education was 92.8 percent.

The contributions to the private sector must be carefully managed. As Balderston (1978) puts it·

> The prudent view requires, first, attention to the claims of the present against the future. Two examples may suffice. A capital gift for construction of a new building is a very nice thing. Both the donor and the recipient institution ordinarily congratulate themselves about it. But the new building also increases burdens on the university's maintenance budget except in the unlikely event that it replaces an obsolete building. Prudence requires that if the university accepts the gift, it must either persuade the donor to provide endowment for maintenance of the building or else make appropriate provision for increased operating budget out of other funds.
>
> A second hard choice between present and future involves the rate of use of income generated from endowment funds. Some private universities, with nudging from the Ford Foundation, have in recent years decided to recognize as income not only the dividends and interest received from endowments but also all or part of the realized capital gains. (The total return

Support by state governments significantly increased during 1978-80 (see Table 8). The average rate of growth was 8.8 percent per year. This support, composed of appropriations, grants and contracts, reached its zenith between 1979 and 1980.

Private philanthropy (see Table 8), which has traditionally supported private higher education (Brubacher & Rudy, 1976), increased without fluctuation until 1981. Its average rate of growth was 10.0 percent per year between 1977 and 1982. In 1982 private higher education realized 64.2 percent of the total contribution of private philanthropy (in the form of gifts, grants and contracts) to higher education (NCES, 1982); however, this proportion shows a gradual decline of 5.3 percent compared to 1975 level. The proportion by private philanthropy contribution given to private higher education was 69.5 percent in 1975 (NCES, 1975, 1977-82).

Endowment income increased at the same rate as tuition and fee revenues between 1977 and 1982 (12.4 percent) in the private sector. This revenue source, although the proportion has remained relatively stable between 1975 and 1982 (see Table 8), shows significant increases between 1979 and 1982 at a average rate of 17.6 percent. In conjunction with the financial support from private philanthropy, endowment income of private institutions represents the largest share of the contribution of revenue sources. In 1982, the participation of private higher education in endowment gains (NCES, 1982) was 84.9 percent in relation to the total

> on endowment funds, of course, includes unrealized capital gains as well.) What might have seemed plausible in the latter 1960s and is now urgently expedient in the 1970s may be a doubtful long-term strategy, however, because price inflation is eroding the purchasing power of the stream of income from endowments. A prudent offset is to set aside part of the income stream to increase the endowment or as an anti-inflation reserve for the future, but this would be very painful to do. So what is now happening is the reduction, over time of the amounts of real activity that a given endowment fund can support, and many universities are making greater current expenditures from endowment income than they will be able to sustain for the long term (pp. 260-261).

Expenditure Trends

The expenditure structure of private higher education institutions did not experience significant changes between 1975 and 1982 (see Table 9), and the emphasis on the spending for instruction, research, and public service remained relatively stable. Research expenditures did undergo a slight decline, decreasing from 9.4 percent in 1975 to 8.0 percent in 1982 (NCES, 1975, 1982).

Previous discussion of the impact of inflation and enrollments took into account the economic environment of private higher education expenditures. The most recent

Table 9

Current Funds Expenditures and Mandatory Transfers of Private Higher Education Institutions in the United States, Years 1975-82

In millions of current dollars

Current Funds Expenditures and Mandatory Transfers	1975		1977		1978		1979		1980		1981		1982	
	$	%	$	%	$	%	$	%	$	%	$	%	$	%
Instruction	3,243	27.9	3,858	27.5	4,189	27.5	4,597	27.1	5,178	27.0	5,883	27.0	6,614	27.4
Research	1,090	9.4	1,249	8.9	1,336	8.8	1,504	8.9	1,691	8.8	1,844	8.5	1,925	8.0
Public service	174	1.5	232	1.5	234	1.5	258	1.5	304	1.6	339	1.6	392	1.6
Academic support	647	5.6	794	5.7	871	5.7	972	5.7	1,091	5.7	1,244	5.7	1,358	5.6
Student services	457	3.9	575	4.1	636	4.2	721	4.2	812	4.2	958	4.4	1,091	4.5
Institutional support	1,147	9.9	1,383	9.8	1,517	10.0	1,712	10.0	1,919	10.0	2,209	10.1	2,514	10.4
Operation and maintenance of plant	857	7.4	1,035	7.4	1,131	7.4	1,265	7.4	1,433	7.4	1,668	7.7	1,875	7.8
Scholarships and fellowships	734	6.3	921	6.6	999	6.6	1,083	6.4	1,230	6.4	1,440	6.6	1,596	6.6
Educational and general mandatory transfers	152	1.3	182	1.3	195	1.2	230	1.4	259	1.5	314	1.4	313	1.3
Auxiliary enterprises	1,540	13.3	1,775	12.6	1,917	12.6	2,092	12.3	2,354	12.3	2,630	12.1	2,928	12.1
Hospitals	982	8.5	1,230	8.8	1,410	9.2	1,609	9.5	1,810	9.5	2,055	9.4	2,332	9.7
Independent operations	594	5.0	809	5.8	810	5.3	945	5.6	1,067	5.6	1,187	5.5	1,182	5.0
Total current fund expenditures and mandatory transfers	11,617	100.0	14,043	100.0	15,245	100.0	16,988	100.0	19,148	100.0	21,771	100.0	24,120	100.0

From: "Financial Statistics of Institutions of Higher Education" by the National Center for Education Statistics (Eds) 1975, 1977-82, Washington, D. C., USA.

statistics on financing higher education (NCES, 1975, 1977-82, 1983; Halstead, 1983; Minter & Bowen, 1975, 1977, 1978, 1980) show that these forces will continue unabated, thus necessitating adequate institutional approaches to maintain a balance among enrollments, inflation, revenues and expenditures (Arth, 1981; Hershey, 1981; Reinert, 1980). To the present, financial resources of private higher education institutions have proven sufficient to cover institutional expenditures (Dickmeyer, 1983; Minter & Bowen, 1980; NCES, 1983-84). However, the decrease in the reserves of independent institutions, the aging of scientific equipment, the shortening of endowment subsidies, the increase of administrative expenses, and the need for renewal of capital assets are signs of imminent decline in the financial condition of higher education institutions (Dickmeyer, 1983).

Higher education expenditures, as indicated by the HEPI (Halstead, 1983), increased more slowly than the CPI during the last 10 years (the CPI had an increase of 128.5 percent, while the HEPI rose at 113.6 percent). Despite the policy of maintaining a lower rate of increase in faculty salaries to reduce educational and general expenditures, the HEPI increase (9.9 percent) was greater than the increase in the CPI (8.7 percent). The upward trend in price of services (data processing, communication, transportation, printing, etc.), fringe benefit payments, and prices of books and periodicals, have contributed to the rise of higher education prices (Halstead, 1983).

Table 10 shows the trends in educational and general expenditures and mandatory transfers between 1977 and 1982. Even when the proportion of the expenditure structure components remained relatively stable, the trend in percentage of annual change shows an upward fluctuating growth.

The analysis of these trends in expenditures requires the consideration of trends in enrollment, revenue sources, inflation and policies for allocation of resources (Halstead, 1983; Bowen, 1981). The expenditures for self-financed activities, such as sales and services of educational activities, auxiliary enterprises, and hospitals are covered by the revenues generated from such activities and are excluded from this analysis (see Tables 7 and 9).

In terms of current dollars, the expenditures for student services, institutional support, and operation and maintenance of plant increased at rates faster than the activities related to the institutional mission (Balderston, 1978), i.e., instruction, research, and public service. This means that the increase of these expenditures may be causing the negative effects alluded to by Dickmeyer (1982). Accordingly, the rise of these kind of expenditures are symptoms of declining financial conditions.

Regarding cost allocation, Bowen (1981) stated:

> The basic concept underlying the revenue theory of cost is that an institution's educational cost per student

Table 10

Percentages of Change in Educational and General Expenditures and Mandatory Transfers, Years 1977-82

Education and General Expanditures and Mandatory Transfers	Average rates of growth	Fiscal Years 1977	1978	1979	1980	1981	1982
		Percentages of change from previous years					
	%	%	%	%	%	%	%
Instruction	11.4	--	8.6	9.7	12.6	13.6	12.4
Research	9.1	--	7.0	12.6	12.4	9.0	4.4
Public service	11.2	--	0.9	10.3	17.8	11.5	15.6
Academic support	11.0	--	9.7	11.6	12.2	12.2	9.2
Student services	13.7	--	10.6	13.4	12.6	18.0	13.9
Instructional support	12.7	--	9.7	12.9	12.2	15.1	13.8
Operation and maintenance of plant	12.6	--	9.3	11.8	13.3	16.4	12.4
Scholarships and fellowships	11.7	--	8.4	8.4	13.6	17.1	10.8
Educational and general mandatory transfers	11.7	--	7.1	17.9	12.6	21.2	-0.3

Note: Percentages computed from the data contained in Table 9. The average rate of growth was computed by dividing the sum of the percentages corresponding to each expenditure category from 1978 to 1982 and divided by 5.

> unit is determined by the revenues available for educational purposes. Given the enrollment, cost per student unit is directly proportional to these revenues. In most institutions, public or private, educational revenues are closely related to endowment. In most public institutions, educational revenues are derived largely from tuitions and from state appropriations based on "enrollment driven" formulas. In most private institutions, educational revenues come mainly from tuitions. The situation is more complicated in the elite private institutions which potentially have considerable control over the internal allocation of revenues to education and research and over enrollment. But even they depend on tuitions as the major source of revenue available for educational purposes (p. 18).

However, any attempt to control the unit cost related to the sources of revenues and level of enrollments tends to be diffused. Because of the variety of sources of revenue, mainly derived from government appropriations (at all levels), tuitions, gifts and grants from private philanthropy, endowment and sales of goods and services, it is possible to say that the amount of total revenue determines the unit costs because the institutions pursue maximization of money inflows from all sources (Bowen, 1981).

According to the position of Bowen (1981), the relationship between the trends in the various revenue sources and the trends in expenditures is difficult to explain by a broad analysis, or the application of a specific revenue source to specific expenditures. O'Neill (1973) stated:

> Because colleges and universities provide a wide range of services other than instruction, however, it is not feasible to identify precisely those sources of funds that go to finance the student subsidy. Unless funds are earmarked for special purposes--such as organized research--there is no rigorous way to line up the various sources of funds with types of costs that go to finance the types of costs to be covered. Schools can and will use funds from any non-earmarked source to cover the costs of its activities, whether instructional or non-instructional (p. 13).

However, in contrast to Bowen (1981), O'Neill (1973) suggested the exclusion of self-financed activities from this type of analysis. This refers to auxiliary services such as dormitories and dining halls, hospitals, and any other activity related to the sale of goods and services.

According to the national statistics of higher education (NCES, 1975-82), the revenues generated by private higher education from student tuition, government at all levels, private philanthropy, and endowments (see Table 7) provided sufficient funds to cover educational and general expenditures (see Table 9) in current dollars.

Taking into account the effect of inflation and enrollment levels, the institutional revenues derived from student tuition, government at all levels, private philanthropy, and endowments were sufficient to cover the educational and general expenditures in constant 1967 dollars (see Table 11). Therefore, the revenues of private higher education institutions have demonstrated an ability to keep pace with inflation and enrollment trends.

In relation to educational and general expenditures per FTE student, the impact of inflation can be observed through the difference between the expenditures per FTE student in constant dollars (real resources) and the expenditure per FTE students in current dollars and the yearly fluctuations of the educational and general expenditures per FTE student (in constant dollars) attributed to the effects of enrollments (Halstead, 1983). Table 12 shows these trends in Index Numbers (Halstead, 1983) to facilitate the comparison between total and FTE student educational and general expenditures in current dollars, and total and FTE student educational and general expenditures in constant dollars.

The analysis of the data shown in Table 12, suggests the following conclusions:

1. The increase in the total educational and general expenditures from 1975 to 1982 (current dollars) was more affected by inflation than enrollment. The total increase of 107.1 percent in the total educational and general expenditures (in current dollars) of private higher education was caused by increases in real resources (constant 1967 dollars) (Halstead, 1983) of 4.3 percent, by the growing inflationary trend effect, which increased by 77.7

Table 11

Current Funds Revenues, Current Funds Revenues in Constant Dollars, Educational and General Expenditures in Constant Dollars, Educational and General Expenditures in Constant Dollars in Private Higher Education Institutions, Educational, and General Expenditures per FTE Student in Current Dollars and Educational and General Expenditures per FTE Student in Constant Dollars, Selected Years, 1975-82

1967 = 100

		Current Funds Revenues		Educational and General Expenditures		Educational and General Expenditures per FTE Student	
1 Years	2 HEPI	3 Constant $	4 Current $	5 Constant $	6 Current $	7 Constant $	8 Current $
		In millions of dollars					
1967	100						
1975	166.2	5,199	8,640	4,582	7,615	2,337	3,885
1977	188.7	5,581	10,531	4,836	9,126	2,394	4,517
1978	201.3	5,619	11,313	4,924	9,914	2,449	4,789
1979	216.9	5,799	12,579	5,085	11,029	2,433	5,277
1980	238.3	5,988	14,270	5,215	12,428	2,392	5,708
1981	263.9	6,152	16,235	5,360	14,145	2,404	6,343
1982	290.1	6,160	17,870	5,436	15,769	2,438	7,071

Note: The data in Column 2 (HEPI) are from "Inflation Measures for Schools and Colleges," (p. 14) by D. K. Halstead, 1983, Washington, D. C., USA. The National Institute of Education. The data in Column 3 were computed by dividing the amount of current funds revenues in Column 4 (revenues from self-supported activities are excluded) by the corresponding HEPI for each year then multiplied by 100. The data in Column 4 were computed from Table 7. The data in Column 5 were obtained by dividing the data in Column 6 (Educational and General Expenditures minus transfers and scholarships and fellowships) by the corresponding HEPI for each year (Column 2). The data in Column 6 were computed from Table 9 (scholarships and fellowships and transfers and expenditures related with self-supported activities are excluded). The data in Column 7 were computed by dividing the data in Column 4 by the number of FTE students per year (Table 6). The data in Column 8 were computed by dividing the data in Column 7 by the corresponding HEPI for each year.

Table 12

Trends in Educational and General Expenditures in Private Higher Education, Amount and Amount per FTE Student in Current and Constant Dollars, Fiscal Years 1975-1983

1975 = 100

	In Index Numbers					
	Educational and General Expenditures		Educational and General Expenditures per FTE Student		3-4 (5)	1-3 (6)
Years	1 Current dollars	2 Constant dollars	3 Current dollars	4 Constant dollars	Inflation effect	Enrollment effect
1975	100.0	100.0	100.0	100.0	--	--
1977	119.8	105.5	116.3	102.4	13.9	3.5
1978	130.2	107.5	123.3	104.8	18.5	6.9
1979	144.8	111.0	135.8	104.1	31.7	9.0
1980	163.2	113.8	146.9	102.4	44.5	16.3
1981	185.8	117.0	163.3	102.9	60.4	22.5
1982	207.1	118.6	182.0	104.3	77.7	25.1

Note: Percentages of change were computed from the data in Table 11 by dividing the amounts corresponding to each year by the amounts in the base year (1975). The data in Column 5 were determined by the differences between Columns 3 and 4. The data in Column 6 were determined by the differences between Columns 1 and 3.

Calculations are adapted from "Inflation Measures for Schools and College" (p. 14), by D. K. Halstead, 1983, Washington, D. C., USA. The National Institute of Education.

percent and the enrollment trend effect, which showed an increase of 25.1 percent.

2. The total educational and general expenditures in constant dollars represent total real resources applied to private higher education (Halstead, 1983) without the inflation effect. The increase of total private higher education expenditures in constant 1967 dollars was 18.6 percent for the time period 1975-82 compared to an increase of 107.1 percent in current dollars. The effect attributed to inflation was 88.5 percent.

Minter and Bowen (1980), after analyzing the trends of private higher education between 1973-74 and 1978-79, found that both the revenue distribution and expenditure allocations remained relatively stable. Current revenues kept pace with the combined impact of the inflationary trends and enrollment increase. Minter and Bowen (1980) stated:

> This was a major accomplishment. However, for current revenues merely to keep pace with enrollment growth and inflation allowed little room for improvement of faculty and staff compensation beyond the cost of living increases. Indeed, in years of double-digit inflation the institutions were not able to raise faculty and staff compensation in pace with increases in the cost of living. Thus, academic compensation fell behind the increase of average wages and salaries for the national labor force and the competitive position of higher education in the labor market

> deteriorated. Moreover, there was little room for improvement in educational programs and quality except as these could be squeezed into constrained budgets p. 69).

After analyzing trends for private and public institutions between 1961 and 1981, Halstead (1983) concluded that:

> The implication of a near constant or slight growth in real resource input per student for the quality of education is not clear. Certainly it is true that both the inputs and outputs of higher education have not remained constant, which prevents rigid application of a fixed input price deflator. The education "product" of today is simply not the same as that of 20 years ago. Neither are the inputs. More attention is now being given graduate education and other special training and services that are fundamentally more costly than the standard undergraduate program. More sophisticated and costly equipment is also being used. Thus, higher education today is different and inherently more costly than it was two decades ago, independent of any inflationary factors. Yet with the exception of a modest increase in the private sector, increased funding in constant dollars per student has not occurred. Possibly the consequence has been a lowering of quality in those programs where resources have been reduced and shifted to expanding more costly academic endeavors. Hopefully, the need for more real

> resources has been met by improving the effectiveness and efficiency of educational operations. During this current period of financial difficulty, college and university officials have undoubtedly taken many positive steps to curtail extravagance and effect true cost savings to enable fixed resources to be reallocated without serious quality deterioration. However, without accurate measure of the outputs of education no precise measure can be made of the degree to which cost savings have been effected to offset greater resource requirements. It remains for each individual institution to constantly struggle with and balance the increasing costs of new programs with cost-saving efficiency so as to avoid any deterioration in quality (pp. 49-50).

Trends in Assets, Liabilities and Fund Balances

The financial position of any institution of higher education at a given time is represented by the financial data contained in the balance sheet. The analysis of data shown in the balance sheet should reveal the financial health and trends in financial strength of colleges and universities (Minter et al., 1982).

Minter and Bowen (1980) analyzed trends in the three basic components of the balance sheet: assets, liabilities, and fund balances.

They detected that between 1969-70 and 1978-79 the net assets of the institutions studied increased 62 percent, liabilities increased 69 percent and fund balances increased 63 percent (see Table 13). The period covered by Minter and Bowen's study was characterized by a rapid inflationary trend, and the enrollment in the private institutions increased by 15 percent. The combined growth of enrollment and the prices of the general economy was 114 percent; nevertheless, neither assets nor liabilities followed this inflationary pattern. This was attributed by Minter and Bowen (1980) to the fact that:

> Most assets are carried on the books at original acquisition value and not revalued in current dollars, and liabilities shown in the balance sheet are fixed obligations for which the dollar amounts do not change with fluctuations in the price level. In fact, during an inflationary period the relative burden of any given amount of debt tends to decline (p. 77).

The trends in the financial structure of assets and liabilities show some signs of a growing financial pressure.

Total liabilities increased faster than assets and fund balances. Between 1976-77 and 1978-79, liabilities increased by 21 percent, net assets by 13 percent and total fund balances grew by 13 percent. Between 1969-70 and 1978-79, interfund borrowing grew by 62 percent and 18 percent between 1977-78 and 1978-79, which is another symptom of financial constraint. The growing interest rates of

Table 13

Changes in Assets, Liabilities, and Fund Balances, All Types of Institutions Combined, End of Fiscal Years 1969-70 to 1978-79 (Index Numbers: 1969-70 = 100)

	1969-1970	1970-1971	1971-1972	1972-1973	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
Assets:										
Current	100	108	118	128	139	146	154	168	182	207
Endowment	100	104	111	118	121	121	127	136	146	156
Plant	100	106	113	118	125	130	136	140	148	157
Other	100	113	125	137	147	159	172	187	208	226
Total assets	100	106	113	119	126	130	136	143	152	162
Interfund borrowing	100	106	123	125	143	128	138	143	157	183
Net assets	100	106	113	119	125	130	136	143	152	162
Liabilities:										
Current	100	109	118	131	141	153	169	175	178	207
Plant	100	106	116	117	122	123	126	126	141	156
Other	100	121	133	146	169	174	185	201	239	254
Total liabilities	100	108	118	121	129	132	138	140	153	169
Fund balances:										
Current	100	106	117	124	136	139	137	159	175	204
Endowment	100	104	111	117	120	120	126	136	145	154
Plant	100	106	112	118	125	132	138	144	151	159
Loan	100	113	127	142	151	163	176	185	199	223
Annuity and life income	100	115	124	131	139	156	172	193	250	299
Total fund balances	100	106	112	119	125	129	136	144	153	163

From: "Fifth Report on Financial and Educational Trends in the Independent Sector of American Higher Education." (p. 38) by J. Minter and Howard A. Bowen, 1980, Washington, D. C., USA. National Institute of Independent Colleges and Universities (NIICU), Copyright 1982, by NIICU. Adapted by permission (Appendix E).

outside borrowing could have fostered the use of internal loans from other funds (Minter & Bowen, 1980). These changes in the balance-sheet structure are shown in Table 13.

The percentage distribution of assets, liabilities, and fund balances remained stable from year to year between 1974-75 and 1978-79 (see Table 14) (Minter & Bowen, 1978, 1980); therefore, the capital side of the institutions did not experience any relative deterioration.

COMPONENTS OF THE FINANCIAL STRUCTURE OF PRIVATE HIGHER EDUCATION INSTITUTIONS

Overview

To understand the financial status of an institution requires familiarization with its total financial structure so that the interrelationship among financial resources can be determined. This overview permits a clearer interpretation of trends in and the condition of financial resources, and therefore, the detection of causes of financial difficulties (Dickmeyer & Hughes, 1982a).

The financial structure of higher education institutions is composed of (1) the elements contained in the balance sheet indicating the financial condition of the institution at a given time, and (2) the components of the statement of current funds revenues, expenditures, and other

Table 14

Percentage Distribution of Assets, Liabilities and Fund Balances, All Types of Institutions Combined, End of Fiscal Years, 1975-76 to 1978-79

	1973-1974	1974-1975	1975-1976	1976-1977	1977-1978	1978-1979
Assets:						
Current	7.6%	--	8.8%	8.6%	8.%	9.0%
Endowment	26.1	--	34.0	35.5	35.1	35.0
Plant	59.5	--	51.0	50.4	49.9	49.4
Other	6.2	--	6.3	6.5	6.6	6.6
Total assets	100.0	--	100.0	100.0	100.0	100.0
Interfund borrowing	2.0	--	2.1	2.1	2.3	2.5
Net assets	98.0	--	97.9	97.9	97.7	97.5
Liabilities						
Current	24.8	--	29.1	27.2	24.8	26.0
Plant	70.0	--	60.1	60.7	58.4	58.5
Other	5.8	--	11.8	12.0	16.9	15.5
Total Liabilities	100.0	--	100.0	100.0	100.0	100.0
Fund balances						
Current	3.3	--	5.3	5.4	5.5	5.9
Endowment	32.7	--	39.7	40.2	40.3	40.1
Plant	56.9	--	49.3	48.6	48.7	48.3
Loan	5.4	--	4.3	4.4	4.3	4.4
Annuity and life income	1.7	--	1.3	1.4	1.4	1.5
Total fund balance	100.0	--	100.0	100.0	100.0	100.0

From: "Fifth Report on Financial and Educational Trends in the Independent Sector of American Higher Education," (p. 87), by J. Minter and Howard R. Bowen, 1980, Washington, D. C., USA. National Institute of Independent Colleges and Universities (NIICU), copyright 1982 by NIICU. Adapted by permission (Appendix E).

changes that show the financial performance of the institution during a set period (Minter et al., 1982).

Public and private institutions often show a similar structure for revenues and expenditures (NCES, [Eds.] 1975-82; Ramsden, 1978). This similarity permits combined and separate analysis of both types of institutions in many studies of trends in higher education financial resources. The analysis of trends in financial higher education undertaken by O'Neill (1973), Millet (1974), Halstead (1983), and the statistics produced by the NCES (1975, [eds] 1977, 1982), constitute good evidence of such analytical comparisons.

However, in the treatment given to certain components of the balance sheet, the situation is not at all similar. Many public higher education institutions do not include plant liabilities because these liabilities are payable by state agencies. On the other hand, there are public institutions that do not abide by generally accepted accounting principles for higher education institutions. Rather, they apply the accounting practices of their state or local government. Consequently, a balance sheet classifying restricted and unrestricted fund balances cannot be prepared for these institutions, and the application of financial indicators to judge overall financial condition and comparisons with other institutions is impossible (Minter et al., 1982). As for the differences in financial structure between public and private institutions of higher education, Minter et al., (1982) stated:

> It should be noted that an increasing number of public institutions are following generally accepted accounting principles, and experience calculating the balance sheet ratios for these institutions shows that the ratios are applicable to them. However, the values applicable to public institutions are different from those pertaining to private institutions, which is not surprising because there are real differences between the public and private sectors.
>
> A major dissimilarity is that some states do not permit retention of sizable fund balances. Another difference is that some public colleges and universities have separate incorporated formulations for research, intercollegiate athletics, and other purposes, which are not consolidated in their financial statements. These differences certainly affect comparability among institutions, but they do not prevent the development of useful ratios by the institutions. Trend analysis is always possible when reporting principles are followed consistently from year to year (pp. 28-29).

The search for consistent definitions when reporting the financial structure of higher education institutions generated more than a three-year discussion between the American Institute of Certified Public Accountants (AICPA) and the National Association of College and University Business Officers (NACUBO). As a result, a consensus on classifications and definitions was adopted. Such classifications and definitions were later refined by NACUBO and the National Center for Higher Education Management Systems (NCHEMS). The product of the discussions was generally acceptable along with agreement about what to include in revenue and expenditure categories (NACUBO, 1982).

Additional support to AICPA and NACUBO to achieve this uniformity in recording and reporting data was obtained by the cooperation of the National Center for Education Statistics (NCES) and NCHEMS. Annual meetings of representatives of public accounting firms and members of NACUBO's Accounting Principles Committee also contributed to reinforce this uniformity. The benefit was a significant improvement in higher education accounting practices and reporting (NACUBO, 1982a).

These generally accepted principles for recording and reporting higher education financial operations are now in use by the majority of colleges and universities in both the public and private sector, and include the following fund groups (Collier & Allen, 1980; NACUBO, 1982a): current funds, loan funds, endowment and similar funds, annuity and life income funds, plant funds, and agency funds.

Each group consists of a combination of individual institutional funds with similar characteristics that are aggregated for financial reporting (Collier & Allen, 1980).

Besides these groups, there may be others that are particular to an institution, like employee retirement funds. This type of fund group is recorded separately and reported in the annual financial statements (NACUBO, 1982a).

As for the treatment that should be given to the recording and reporting of these fund groups, NACUBO (1982a) stated:

> Each fund group is considered as a separate entity. There are numerous transactions among the fund groups, which must recognize this entity concept. When the movement of funds from one fund to another is intended to be permanent, it should be recorded as a transfer between the fund entities. However, when the movement is intended to be temporary, the transaction should be recorded as an interfund borrowing. To be considered temporary, and therefore an interfund borrowing, there should be a definite plan of repayment within a defined period of time. A further indication that a borrower-lender relationship exists would be if interest were being paid by the borrowing fund group to the lending fund group.
>
> When the current funds group is divided into two or more parts, such as unrestricted, auxiliary enterprises, and restricted categories, the permanent or temporary movement of funds among these parts would follow the rule above. One example of this would be an auxiliary enterprise having a deficit that must be

> eliminated because of a provision in agreement with bond holders. Another would be the lifting of a restriction by a donor, resulting in the movement of funds from a restricted to unrestricted category.
>
> In some instances, legal provisions and government regulations pertaining to certain funds may require accounting and reporting practices that differ from generally accepted accounting principles. It is recognized that in these instances such legal and regulatory provisions must take precedence. However, such restrictions do not obviate the need for adhering to generally accepted principles for the purposes of reporting financial position, changes in fund balances, and current funds revenues, expenditures, and other changes (p. 4).

This position is grounded on the definition of fund accounting, which is defined by NACUBO (1982a) as:

> . . .the manner of organizing and managing the accounting by which resources for various purposes are classified for financial accounting and reporting purposes in accordance with activities or objectives as specified by donors, with regulations, restrictions, or limitations imposed by sources outside the institution, or with directions issued by the governing board (p. 4).

Therefore, the difference between externally restricted funds and those depending on the decisions of the governing board should be reflected in the accounts and disclosed in the financial reports.

The Concept of Fund

According to NACUBO (1982a), "a fund is an accounting entity with a self-balancing set of accounts consisting of assets, liabilities, and a fund balance." (p. 4.) Despite separate accounts maintained to indicate the limitations and restrictions on the disposition of the financial resources, funds with certain characteristics in common may be combined into fund groups for reporting purposes (Collier & Allen, NACUBO, 1980; NACUBO 1982a).

As previously indicated, the fund groups fall into six broad categories: current funds, endowment and similar funds, plant funds, loan funds, and annuity and life income funds (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982a).

Current Funds Group

The fund group includes every financial resource expendable for the daily operation of higher education institutions. Current funds are usually divided into unrestricted and restricted accounts. The unrestricted current funds are available for any purpose, as determined by the governing board (Collier & Allen, 1980) and no stipulation is imposed by the grantors of the funds about how these funds should be used (NACUBO, 1982b). Restricted funds are available for a specific purpose designated by the grantor of the funds (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b).

The current fund group includes revenues, expenditures, assets, liabilities, and fund balances. The inclusion of these financial resources into the current fund category depends on how soon they will be used for operating purposes (Collier & Allen, 1980; NACUBO, 1982b). The category of restricted or unrestricted is determined by the flexibility of the institution to manage the intended use of the funds without appealing to a legislative process (NACUBO, 1982b). This section will focus on the study of current funds revenues and expenditures. Assets, liabilities, and fund balances of current funds will be studied in conjunction with those of the other fund groups.

Current Fund Revenues

Current funds revenues, restricted and unrestricted, should be grouped into the following broad categories by sources of funds (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b): tuition and fees; Federal appropriations; state appropriations; local appropriations; Federal grants and contracts; state grants and contracts; local grants and contracts; private gifts, grants and contracts; endowment income; sales and services of educational activities; sales and services of hospitals; other sources; and independent operations.

Tuition and Fees. This revenue source comprises all tuition charges and fees assessed (net of refunds) against students for current operating purposes. Remissions and exemptions related to tuition and fees should be considered and reported as revenue, even when the student is exempted from payment for this concept. This amount related to remissions or exemptions should be treated as expenditures and according to the purpose of the exemption. Thus, if the exemption is for student aid, the amount should be classified into the category of scholarships and fellowships. If the exemption is due to a formal policy that grants exemptions to relatives of the institution's staff or the staff itself, the corresponding amount should be treated as staff benefits in the appropriate expenditure category (Collier & Allen, 1980; NACUBO, 1982b).

When tuition and/or fees are remitted to the state to compensate state appropriations, the amount of tuition and fees should be deducted from the total for state appropriations and added to the total for tuition and fees (Collier & Allen, 1980; NACUBO, 1982b).

When student fees are assigned to debt service, renewals and replacements, or unexpended plant funds depend on the decision of the governing board, such fees should be reported as unrestricted current funds revenues, and included in this category. Pledged revenue under bond indenture agreements should be reported as unrestricted current funds revenues. Income from fees restricted to debt service for institutional plant or for renewals and replacements of plant or for expansion of facilities should be reported as additions to plant funds rather than to current funds, since these incomes are not legally available for current operations (Collier & Allen, 1980; NACUBO, 1982b).

Charges for room, board, and other services provided by auxiliary enterprises should be classified as sales and services of auxiliary enterprises. When an all-inclusive fee for tuition, room, and board is charged, the amount should be reasonably allocated both between the categories tuition and fees and sales and services of auxiliary enterprises. Revenues derived from student health services (operated as a service to the student rather than as an auxiliary enterprise) should be classified in the tuition and fees category (NACUBO, 1982b).

Federal, State, and Local Government Appropriations. These sources of revenues include those monies derived from acts of a legislative body. Federal, state and local government appropriations include restricted and unrestricted appropriations to the extent expended for current operations. Funds expended for the account of a given institution by a governmental agency, such as payments into a state retirement system, should be classified into these categories (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b).

The categories contain only governmental appropriations derived from tax levy funds, including taxes collected directly by the institution under authority conferred by the legislature or constitution, federal land-grant appropriations, and federal revenue sharing funds. Tuition and fees collected by the institutions and returned to the institution as appropriations (reappropriated tuition and fees) should be deducted, as they are included in the tuition and fees category.

Governmental appropriations should be classified into federal, state, and local, in accordance with the legislative body providing the funds. Federal funds for higher education with specified purposes and administered by the state should be classified as federal monies. Nevertheless, the federal funds for higher education distributed to the states without specification of the fund purposes, such as general revenue sharing, should be considered as state monies rather than federal monies (Collier & Allen, 1980; NACUBO, 1982b).

The classification of these government appropriations into restricted or unrestricted funds is grounded in the ability of the governing board of the institution to effect shifts in the intended use of funds. When a change in a specific restriction can be made, waiving a legislative process, these funds should be deemed unrestricted (NACUBO, 1982b).

Federal, State, and Local Government Grants and Contracts. These sources of revenue include monies from governmental agencies assigned to specific projects or programs, such as research projects, training programs, and similar activities for which amounts are received or expenditures are reimbursable under the terms of a governmental grant or contract. They should be classified by governmental level (federal, state, or local). When a federal agency determines a specific use for particular funds and such funds are only administered by state agencies, these revenues should be classified as federal funds within revenue coming from Federal government grants and contracts (Collier & Allen; Hughes, Leonard & Williams, 1982; NACUBO 1983b).

Private Gifts, Grants, and Contracts. These types of revenue include funds divided from nongovernmental organizations and individuals including monies coming from agreements for the supply of goods and services of an institutional, research, or public service nature. It includes all nonrestricted gifts, grants, and bequests, restricted gifts, grants and contracts from nongovernmental sources to the extent these resources are used to cover current operations during the current fiscal year. The funds derived from gifts, grants, and contracts from foreign governments should be considered as private gifts, grants and contracts (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO 1982b).

When the income is derived from funds held in revocable trusts or allocated at the direction of the trustees of the trust, such income should be classified with this account.

When this income is of a significant amount it should be disclosed in the notes of the financial statements. Revenues derived from contracts and other activities such as utility services that are not directly associated with instruction, research or public service should be excluded from this account. Finally, the uses of funds coming from restricted current funds and equal to incurred direct costs should be reported as restricted current funds revenues, while those amounts equal to the associated indirect cost expenditure should be treated as unrestricted revenues (Collier & Allen, 1980; NACUBO, 1982b).

Endowment Income. This category includes:

1. Unrestricted income of endowment and similar funds;
2. Restricted income of endowment and similar funds to the extent expended for current operations; and
3. Income from funds held in trust by others under irrevocable trusts.

The total ordinary income earned or yielded on the investments of these funds should equal the amount of endowment and similar funds credited to revenues (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982c).

Revenues derived from investments of endowment and similar funds exclude capital gains and losses, since such gains and losses are considered as either additions to or deductions from funds balances. When a portion of the gains of endowment or quasi-endowment funds investment is used for current operations, the portion expended should be classified as a transfer rather than a revenue (Collier & Allen, 1980; NACUBO 1982b).

For the reduction of the effect of year to year fluctuations in the amount of current investment income derived from endowment investment pools, some institutions have established endowment income stabilization reserves. The funds thus considered as coming from investment pools are distributed to the participating funds. The amounts classified as unrestricted current funds would be reported as endowment income. Any amounts separated for the stabilization reserve should be reported as an allocation of unrestricted current fund balances and appropriately reflected in the balance sheet as a subdivision of that balance. Amounts applicable to restricted current funds should be classified as additions to those fund balances and deductions therefrom and should be considered as restricted current fund revenues. The unexpended funds from endowment income will remain as endowment fund balances available for the next period (NACUBO, 1982b).

Sales and Services of Educational Activities. These types of revenues include income derived from the sale of goods and services to conduct the activities of instruction, research, or public service. Film rentals, scientific and literary publications, testing services, university presses, and dairy products. The treatment of these revenues for reporting purposes will depend on the form of agreement by which the services are rendered. Revenues generated by hospitals and health clinics that are a part thereof should be considered as sales and services of hospitals. Nevertheless, income derived from health clinics that are not part of a hospital, excluding those that are part of the student health service program, should be reported in this category (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b).

Sales and Services of Auxiliary Enterprises. These revenues include all the monies generated by those entities existing to furnish goods or services to students, faculty, or staff and related fee charges, even when not necessarily equal to the cost of the goods and services. The general public may incidentally purchase goods and services from auxiliary enterprises. Auxiliary enterprises comprise residence halls, goods and services, student health services, intercollegiate athletics (when operated as self-financed activities), college unions, college stores, and other services, such as barber shops, movie houses, and so forth (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b).

This category does not include revenues derived from gifts, grants and contracts or endowment income restricted to auxiliary enterprises. These auxiliary enterprise revenues are limited to those produced by the auxiliary enterprises themselves (Collier & Allen, 1980; NACUBO, 1982b).

Sales and Services of Hospitals. This source of revenue includes all monies (net of discounts, allowances, and provision for doubtful accounts) derived from hospitals. This category includes patient care, special services, and health clinics that are part of the hospital. Revenues derived from research and other specific purpose gifts, grants, or endowment income restricted to the hospital should be included in the appropriate revenue source (NACUBO, 1982b).

Other Income Sources. This category includes all revenues not classified into the previous described sources of income, such as interest income and gains, and loses on investment in current funds, miscellaneous rentals and sales, expired term endowments, and terminated annuity or life income agreements (Collier & Allen, 1980; NACUBO, 1982b).

Independent Operations. This category includes all the monies derived from operations independent of or related to higher education institutional missions--instruction, research, and public service. This category generally comprises only those revenues derived from the activities of major federally-funded research laboratories (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b).

Current Fund Expenditures.

Current fund expenditures as defined by NACUBO (1982b) "are the recognition of the expending of resources of the Current Funds group toward the objectives of each of the respective funds of that group." (p.6).

Current fund expenditures are reported separately in the statement of current fund revenues expenditures and other changes; however, they may be presented as a single figure in the statement of changes in funds balances. Generally, current fund expenditures show the following classification (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b): educational and general; auxiliary enterprises; hospitals; and independent operations.

Educational and General Expenditures.

Educational and general expenditures include the components listed below.

Instruction. Includes all monies expended for the activities associated with or part of an institution's instructional program. This type of expenditure includes credit and non-credit courses for academic, vocational, and technical instruction, for remedial and tutorial instruction, and for regular, special, and extension sessions. Expenditures for departmental research and public service not separately budgeted should be classified in this category. Academic administration, when the primary assignment is administration (academic dean, for example) is excluded.

Nevertheless, expenditures for department chairmen are included because instruction is still an important function of the administrator (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b).

Research. This category includes all expenditures for activities specifically organized with the purpose of producing research findings. Such research activities may be commissioned by an external agency or undertaken under a separate budget by an organizational unit within the institution. Under these conditions, expenditures for individual research, project research, and research of institutes and research centers are included. But all sponsored programs are not included in this category nor is it necessarily limited to sponsored research, since internally supported research programs, when separately budgeted, might be included under the conditions described above (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b).

Public Service. This category includes expenditures for activities established with the primary purpose of providing noninstructional services on behalf of individuals and groups external to the institution. These activities include community service programs (excluding instructional services) and cooperative extension services, conferences, institutes, general advisory services, reference bureaus, radio and television, consulting, and similar noninstructional services (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982c).

Academic Support. The expenditures classified in this category include funds expended to provide support services for the higher education primary mission--research, instruction, and public service. Thus, the following activities are included:

1. The retention, preservation, and display of educational materials, such as libraries, museums, and galleries;
2. the provision of services for the support of academic functions, such as demonstration schools associated with a department, school or college of education;
3. media such as audiovisual services, and technology such as computing support;
4. academic administration (including academic deans but not department chairpersons) and personnel development for administrative support and management direction towards the fulfillment of the institutional mission; and
5. separately budgeted support for course and curriculum development. For institutions that generally ascribe some expenditures, such as computing support, directly to the several operating units of the institutions. These types of expenditures are not included within this category (Collier & Allen, 1980; NACUBO, 1982b).

Academic support includes the following subcategories: libraries, museums and galleries, educational media service, academic computing support, ancillary support (to provide practical experience to students excluding teaching hospitals), academic administration, academic personnel development, and course and curriculum development (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b).

Student Services. This category comprises the funds expended for the offices of admissions and registrar and those activities primarily aimed at contributing to the physical and emotional well-being of the student outside the environment of the formal instructional program. Thus, expenditures for student activities, cultural events, student newspapers, intramural athletics, student organizations, intercollegiate athletics (when operated as a part of the Department of Physical Education and not as an essentially self-financed activity), counseling and career guidance (excluding informal academic counseling by the faculty), student aid administration, and health services that are not self-supporting activities. Thus, the subcategories generally included in student services should be student services administration, social and cultural development, counseling and career guidance, financial aid administration, student admissions, student records, and student health services (Collier & Allen, 1980; NACUBO, 1982b).

Institutional Support. The expenditures generally included in this category are related to:

1. central executive level activities concerned with management and long range planning of the entire institution, such as the governing board, planning and programming, and legal services;
2. fiscal operations, including the investment office;
3. administrative data processing;
4. space management;
5. employee personnel and records;
6. logistical activities that provide procurement, storerooms, safety, security, printing, and transportation services to the institutions; support services to faculty and staff not operated as auxiliary enterprises; and
7. activities concerned with community and alumni relations, including development and fund raising.

Therefore, the following subcategories are included: executive management, fiscal operations, general administration and logistical services, administrative computing support and public relations/development (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b).

Operations and Maintenance of Plant. This category includes all expenditures of current operating funds for operations established to provide services and maintenance related to grounds and facilities. Utilities, fire protection, property insurance, and similar items are also included. Expenditures from the institutional plant funds accounts are excluded from this category. Therefore, the following subcategories are included: physical plant administration, building maintenance, custodial services, utilities, landscape and grounds maintenance, and major repairs and renovations (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b).

Scholarships and Fellowships. This category comprises outright grants to students selected by the institution and financed from current funds, restricted or unrestricted, trainee stipends, prizes and awards. Those trainee stipends awarded to individuals not enrolled in formal course work are excluded from this category; thus, the expenditures for this concept should be included in instruction, research or public service as appropriate. When the institution is given custody of the funds and does not have the right to the selection of the beneficiary of the grant--such as Federal Basic Educational Opportunity Grants program--the funds should be included in the agency funds group rather than in the current funds group. When the beneficiary of these types of grants is required to perform services in exchange for financial assistance, the charges should be associated with the expenditures of the organizational unit where the recipient of the grant is performing such services. Student aid in the form of tuition or fee remissions should be classified into this category. Nevertheless, remissions of tuitions or fees granted according to faculty or staff status, or students who are relatives of faculty or staff, should be included as staff benefit expenditures in the appropriate functional expenditure classification. Thus, the following subcategories are included:

1. Scholarships, which refer to outright grants-in-aid, trainee stipends, tuition and fee waivers, and prizes to undergraduate students; and,
2. Fellowships, which include outright grants-in-aid and trainee stipends to graduate students--payments to graduate students for teaching are excluded (Collier & Allen, 1980; NACUBO, 1982b).

Auxiliary Enterprises. The expenditure of auxiliary enterprises has the distinguishing characteristic of being essentially self-supported by the revenues generated from furnishing goods or services to students, faculty or staff, and charged a fee directly associated with--even when not necessarily equal to--the costs of goods and services. Expenditures for student health services, when operated as self-supported activities should be included in auxiliary enterprises. Expenditures for hospital and hospital derived revenues are separately classified because of their relative financial significance. Thus, this category includes operating expenditures and transfers for operation and maintenance of plant and for institutional support. Other direct and indirect costs are also included, whether allocated as a proportionate share of costs of other departments or units or charged directly as expenditures (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982b).

Hospitals. Includes all expenditures and transfers relating to patient care operations of the teaching hospitals, including nursing and other professional services, general services, administrative services, fiscal services, and charges for physical plant operations and institutional support. Regarding other direct and indirect costs, the treatment is similar to the case of auxiliary enterprises. Activities (although carried out within the hospital) categorized more appropriately as instruction or research, should be classified in the corresponding instruction or research category rather than an hospital expenditures. Therefore, the expenditures category for hospitals includes: direct patient care, health care supportive services, administration, physical plant operations, and hospital mandatory transfers (Collier & Allen, 1890; NACUBO, 1982b).

Independent Operations. The expenditures included in this category are those unrelated to, but which may contribute to the enhancement of the primary mission of a given higher education institution. These expenditures are mainly limited to those associated with major federally funded research laboratories. This category does not include those expenditures related to management and investment of endowment funds. The following subcategories are classified within the independent operations category:

1. Institutional independent operations--commercial enterprises--owned or controlled by the institutions but not aimed at providing services to students, faculty or staff or to provide support to one or more of the institution's missions; and
2. independent operations/IFRDCs that include expenditures related to the activities of federally-funded research and development centers (Collier & Allen, 1980; NACUBO 1982b).

Loan Funds Group.

According to NACUBO (1982c), the purpose of this fund group is to report the resources available for loans to students, faculty, and staff. The sources of funds for this group are mainly composed of:

- Gifts of funds operated on a revolving basis. Repayments of principal and interest may be loaned to other individuals.
- Gifts and grants providing that, on repayment of principal and interest, the proceeds must be refunded to the grantors or donors of the funds.
- Endowment fund income restricted to loan fund purposes.
- Refundable grants by the Federal government to provide funds for student loans.
- Financial resources transferred from current funds to match refundable Federal government grants.
- Unrestricted current funds designated by the governing board to provide loan funds.

- Revenues and gains from investments of loan funds.
- Interest carried on loans.

The consideration given to assets, liabilities, and increases and decreases in loan funds balances (NACUBO, 1982c) will be studied in conjunction with the other fund groups.

Endowment and Similar Funds Group.

The endowment and similar funds group includes those investments aimed at providing revenues from earnings for institutional use. The principal is maintained intact, while gains on such investments are available for the financing of the institutional operations (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982c).

This fund group includes:

Endowment Funds: those sources for which the donors have determined that the principal of the gift always remains intact and only the earnings can be used for expenditure (Collier & Allen 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982c).

Term Endowment Funds: those resources for which the donor requires that the principal remains intact and only the earnings can be used for expenditure during a determined period of time or until a specific event has occurred. When the conditions of the endowment have been fulfilled, the principal is also available for expenditure (Collier & Allen, 1980; NACUBO, 1982c).

Quasi-Endowment Funds: those funds that the institution's governing board has decided to retain for investment. Since these funds are not restricted by external donors or agencies, both the principal and the earned revenues may be administered at the discretion of the governing board (Collier & Allen, 1890; NACUBO, 1982c).

Similar to the other fund groups, the category endowment and similar funds also includes assets, liabilities, and fund balances (NACUBO, 1982c). This category will also be studied with those of the other fund groups.

Annuity and Life Income Funds Group. The annuity and life income funds group comprises all funds for the financing of payments to one or more determined beneficiaries (generally the donor). When the institution must pay a determined amount to the beneficiary, the fund is considered as an annuity fund; when the institution agrees to pay only the revenues derived from the assets of the fund or a stipulated percentage of its market value, it is classified as a life income fund. The principal of the annuity or life income fund will be the property of the institution when the beneficiary dies, or when a certain point of time is reached. Once the fund becomes the property of the institution under the conditions previously mentioned, this financial resource may be administered at the discretion of the institution or as specified in the terms of the agreement.

Annuity and life income funds may be reported as part of the endowment and similar funds group in the case of non-material amounts. In this particular case, the annuity and life income funds are reported as a subcategory of endowment and similar funds. The financial structure of annuity and life income funds is composed of assets, liabilities, and a fund balance whose details will be given in the next section of this chapter (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982c).

Plant Funds Group. The plant funds group refers to all of the physical plant assets of the institution as well as the monies available for new construction or acquisition, debt service on plant, and renewal and replacement reserves. Generally the following four subgroups are included in this category (Collier & Allen, 1980):

1. Unexpended Plant Funds: funds available for new construction and acquisitions of physical property that have not been expended as of the reporting date.
2. Funds for Renewal and Replacement: funds available for the renovation and improvement of institutional properties. This subgroup does not include funds used for the regular maintenance and repair of the institutional properties--such expenditures are classified in the current fund.

3. Fund for Retirement of Indebtedness: those resources available to amortize the debt, both principal and interest, on institutional properties.
4. Investment in Plant: all funds invested in physical properties that make up the physical plant.

NACUBO (1974) identified the following sources of funds for the plant funds group.

- Funds from external agencies;
- student fees and assessments for debt service or other plant purposes (restricted funds);
- mandatory and non-mandatory transfers from other fund groups;
- loans from external sources for plant purposes;
- loans from other fund groups; and
- revenues and net gains from investments, whether restricted or unrestricted.

Agency Funds Group. The agency funds group refers to all funds for which a given institution serves as the custodian or fiscal agent without owning such funds. When the institution manages these funds performing as a fiscal agent, this circumstance implies providing accounting services for the owner of the funds. Agency funds are excluded or simply footnoted for accountability purposes when the purpose of a particular report is to detail the total resources available for use by the institution (Collier & Allen, 1980; Hughes, Leonard & Williams, 1982; NACUBO, 1982c).

Assets, Liabilities and Fund Balances of Fund Groups. Any given institution of higher education that follows the generally accepted principles and practices of fund accounting will have a financial structure consisting of a set of funds. Each fund consists of assets, liabilities, and a fund balance (NACUBO, 1982a). These assets, liabilities, and fund balances are reported to detail information on institutional financial status at a point in time, generally at the end of the fiscal year. Although fund balances are also reported in the statement of changes in the fund balances, the principal financial statement for reporting assets, liabilities, and fund balances is the balance sheet. These fund components are reported separately for each fund group (excluding the agency fund group) of the restricted and unrestricted funds within a fund group, and eventually for fund subgroups (Collier & Allen, 1980).

Assets, Liabilities and Funds Balances of Current Funds

Current Fund Assets. This category includes items such as cash, short-term investments, accounts and notes receivable, inventories, prepaid expenses, and deferred charges (Collier & Allen, 1980; NACUBO, 1982b).

Current Fund Liabilities. This category includes accounts and notes payable, accrued liabilities, deposits, and deferred revenues (Collier & Allen, 1980; NACUBO, 1982b).

Generally assets and liabilities are separately classified into restricted and unrestricted current funds. However, for reporting purposes, the individual assets and liabilities, with the exception of fund balances, of restricted and unrestricted current funds are eventually combined. In this particular case, the borrowings between unrestricted and restricted funds should be disclosed by footnote or other appropriate means (Collier & Allen, 1980; NACUBO, 1982b).

Current Funds Balances. The current fund balances are the result of the difference between the value of current assets and current liabilities. Fund balances should always be reported separately for restricted and unrestricted current funds. Restricted current balances include restricted revenues from endowment funds, the remaining portion of gifts limited to particular operating purposes, the remaining amount of grants, or contracts received for the performance of determined activities, and appropriations restricted to particular endeavors. The portion of current fund balances without such restrictions is considered as unrestricted (Collier & Allen, 1980; NACUBO, 1982b).

Assets, Liabilities and Fund Balances of the Loan Funds Group

Assets of the Loan Funds. This category includes cash, notes receivable, and temporary investments of cash available for loans. Notes receivable should reflect their face value (including both principal and interest) less an allowance for uncollectible loans (Collier & Allen, 1980; NACUBO, 1982c).

Liabilities of Loan Funds. These liabilities include amounts due for collection fees, amounts due for administrative costs, and amounts due as refunds (Collier & Allen, 1980; NACUBO, 1982c).

Fund Balances of Loan Funds. Fund balances of loan funds are determined by the difference between the assets and liabilities of this fund. These fund balances are reported separately for restricted funds (for loan purposes), and unrestricted funds (available for other institutional purposes) (Collier Allen, 1980; NACUBO, 1982c).

Assets, Liabilities and Fund Balances of Endowments and Similar Funds

Assets. The assets of endowment and similar funds are primarily composed of cash and investments, including marketable securities, real estate, patents, copyrights, royalties, and so forth (Collier & Allen, 1980; NACUBO, 1982c).

Liabilities. The liabilities of endowments and similar funds consist basically of any indebtedness charged against the above assets and the amounts due to other fund groups (Collier & Allen, 1980; NACUBO, 1982c).

Fund Balances. Similar to the other fund groups, the fund balances are determined by the difference between assets and liabilities. Fund balances are reported separately for each subgroup--endowments, term endowments, and quasi-endowments (Collier & Allen, 1980; NACUBO, 1983c).

Assets, Liabilities and Fund Balances of the Annuity and Life Income Fund

Assets. The assets of the annuity and life income fund basically consist of cash and investments (Collier & Allen, 1980; NACUBO, 1982c).

Liabilities. The liabilities of the annuity and life income fund refer to the actuarial expected value of the annuity funds to the beneficiaries and the payments to beneficiaries of life income funds (Collier & Allen, 1980; NACUBO, 1982c).

Fund balances. The balance of annuity funds is reported in accordance with the difference between the value of the assets of this fund and the payments to be made in accordance to the annuity agreement. This fund balance does not refer to the total resources of annuity funds held by the institution. Life income funds balances are considered as the difference between the assets of this subgroup and any liabilities due from this fund (Collier & Allen, 1980; NACUBO, 1982c).

Assets, Liabilities and Fund Balances of Plant Funds

Assets. The assets of plant funds are composed of cash, investments, accounts and notes receivable, amounts due from other fund groups, funds in deposit with others, land, buildings, other improvements, and equipment owned by the institution. Assets that have been purchased are evaluated at cost, and those that have been donated are appraised at the market value. When adequate historical costs are not available, estimated valuations may be made; in this case the method of valuation should be clarified in the financial statements (Collier & Allen, 1980; NACUBO, 1974a).

Liabilities. The liabilities of plant funds include accounts payable, bonds, notes and mortgages payable, and amounts owed to other funds. Usually, assets and liabilities are reported separately for each subgroup included in the plant funds group (Collier & Allen, 1980; NACUBO, 1974a).

Fund Balances. Fund balances should be reported separately for each subgroup and restricted fund balances reported separately in appropriate subgroups, generally unexpended plant funds. Fund balances in the unexpended plant funds subgroup, renewal and replacement subgroup, and retirement of indebtedness subgroup indicates the reserves available for those particular purposes (Collier & Allen, 1980; NACUBO, 1974a).

Additions, Deductions, and Interfund Transactions

Additions, deductions and interfund transactions are operations related to the diverse changes in the financial performance and positions of higher education institutions.

Additions. Additions reflect the increase of financial resources into a fund group during a specific time period, generally a fiscal year; however, they do not represent transfers from one fund group to another, but new resources flowing into the institution during a given fiscal year. Additions differ from revenues because the accrual basis of accounting states that revenue should be reported only when earned. Therefore, restricted funds are not earned revenues until the resources of such restricted funds are expended for the specific purposes stipulated by the grantor of the funds. Unrestricted revenues are placed in the current fund as a revenue on receipt. The term "additions" refers to all fund groups. Since not all restricted monies flow into the institutions for purposes reflected in the current fund group when they are physically received, such restricted funds are reported as additions to the corresponding fund group in the statement of change in fund balances (Collier & Allen, 1980; NACUBO, 1974b).

Deductions. Deductions are the decrease of financial resources in a given fund group during a determined reporting period, generally a fiscal year. Similar to additions, deductions do not imply transfer of funds among groups. Rather, they represent those financial resources flowing out of the fund groups of the institution. Both deductions and expenditures are reported separately for each fund group and for restricted and unrestricted funds. Thus, similar to additions, deductions are reported in the statement of change in the fund balances, whereby increases and decreases of each fund group are shown. Nevertheless, the statement of current funds revenues, expenditures and other changes reports only earned revenues, expenditures and transfers relating to the current funds group (Collier & Allen, 1980; NACUBO, 1974b).

Interfund Transactions. Interfund transactions are classified into two categories; interfund loans and transfers. Interfund loans move funds from one group in accordance with prudent financial management. These transactions are operated under the condition that the fund group borrowing the resources will return the borrowed amount to the fund group that provided the internal loan. Any outstanding loan as of the date of the report must be reflected on the balance sheet showing the amounts due to or due from another fund. Moreover, any interest paid or received from interfund borrowings must be shown on the statement of changes in fund balances and/or the statement of current funds revenues, expenditures, and other changes in the corresponding category of revenue or expenditure (Collier & Allen, 1980; NACUBO, 1974b).

Transfers. Transfers are financial transactions that move resources from one fund group to another under perma-

and expenditures applicable to future period should be deferred" (p. 5).

Nevertheless, when specified deferrals and accruals are omitted, such as investment income and interest on student loans, the financial statement should not reflect any material effect derived from this omission. Institutions maintaining the books on a cash basis should make the necessary adjustments for the conversion of the accounts to accrual basis (NACUBO, 1982a).

Purposes of Financial Reporting

Generally, the annual financial reports of institutions of higher education are designed to disclose the sources and uses of funds. The balance sheet, the statement of changes in fund balances, and the statement of current fund revenue expenditures and other changes are the formal financial reports of any institution of higher education (Hughes, Leonard & Williams, 1982). A major objective of financial reports of institutions of higher education is the use of such financial reports for the evaluation of resource management in meeting an institution's goals. Appendices A, B, and C show models of financial statements according to NACUBO's Standards of Reporting (NACUBO' 1974b).

Use of Financial Data for Analysis and Management Purposes

The financial structure shown in the institutional reports is the principal data source for the design and use of measures and indicators of the financial conditions and performance of higher education institutions (Minter et al., 1982; Jenny, 1979).

Traditionally, financial evaluations emphasized revenues and expenditures and seldom paid attention to the balance sheet accounts. Minter and Bowen (1975) after analyzing the trends between 1969 and 1974 stated:

> . . .the art of analyzing consolidated balance sheets of colleges is in its infancy. Because of the valuation of assets at book value, the practice of most colleges and universities to ignore depreciation, the difficulty of reconciling the two purposes of accounting--fiduciary and managerial--and the fuzziness of institutional use of restricted assets, balance sheets are soft and difficult to interpret. Yet they are in principle very important to financial analysis of academic institutions. We have tried to make a beginning in the presentation and interpretation of balance sheet data. (p. 59.)

Therefore, the evaluation of the financial condition of higher learning institutions is not complete without an analysis of the balance sheet (Jenny, 1979). Jenny suggests that since higher education typically distinguishes among several separate funds, changes in those fund balances have become an important part of financial analysis. Less developed is the study of the changing asset, liability, and net asset structure. (p. 217).

nent conditions. Thus, the recipient fund will not have to return the amount being transferred to the fund providing the resources. There exist generally two types of transfers; mandatory and non-mandatory transfers. Mandatory transfers include the transfer of funds from the current fund to other fund groups to meet the conditions underlying restricted funds. Non-mandatory transfers represent transfers from any fund group to another at the discretion of the governing board (Collier & Allen, 1980). Transfers are reported in the fund group from which the resources are provided as well as in the fund group to which such resources are transferred (Collier & Allen, 1980).

THE ROLE OF FINANCIAL REPORTING IN FINANCIAL ANALYSIS AND MANAGEMENT

Overview

As emphasized in the preceding section of this chapter, the financial reports of higher education institutions should be prepared consistent with the generally accepted principles and practices of fund accounting already delineated in the preceding section of this chapter as well as accrual accounting (NACUBO, 1982a).

According to accrual accounting, revenues should be reported when earned and expenditures when goods and services are received (NACUBO, 1982a). NACUBO stated: "expenses incurred at the balance sheet date should be accrued

The new developments in financial analysis through the use of ratios and indicators permits a more comprehensive use of the data contained in the financial statements of higher education institutions (Jenny, 1979). Most public and private institutions report their financial and non-financial statistics to the Higher Education General Information Survey (HEGIS) developed by the NCES. This coordinated data collection system makes it possible to conduct institutional and intersector comparisons related to higher education. Thus, comparison at the local and national level as well as the formulation and evaluation of financing higher education policies can be undertaken by using this data. HEGIS data also has been useful for the development of national economic indicators for higher education institutions. Such indicators include the Higher Education Price Index (HEPI), Research and Development Price Index, Capital Component, and similar economic indicators (NACUBO, 1980).

Moreover, HEGIS data are useful to individual institutions for their own analytical studies. Thus individual institutional financial performance can be compared with national trends and trends in the financing of peer group institutions for the development of future financial plans. The budgeting process can benefit from an overview of higher education expenditures and revenue patterns at the state and national level (NACUBO, 1980).

A high degree of validity and reliability of the data reported must be ensured to present credible information.

Hence, audited financial statements should be coded to the same definitions and standards to minimize extensive and substantial reporting errors. The analysis of the financial condition of higher education as well as of individual institutions requires a higher degree of accuracy at the institutional level (Minter & Conger, 1979a, 1979b). Furthermore, the need for valid and reliable information is considered by Lesher and Mazur (1981) as the primary objective of any financial accounting system in support of the management information requirement of the college or university. These management needs have intensified the search for approaches that guarantee more timely information and control over fiscal operations. Thus, Lesher and Mazur suggest the implementation of a computerized financial accounting system in both large and small institutions for the support of the following functions:

- provide internal control to insure the validity of financial information and records;
- assist financial management in the analysis of financial and statistical data, and report significant information to top management and the board for use in decision making;
- provide financial information to operating units to assist administrators in making appropriate decisions;
- protect assets to insure that cash investment, plant, receivables, etc., are neither wasted nor lost;

- ensure that the college or university is complying with the many state and federal regulations that affect or require financial information (pp. 206-207).

Finally, the financial survival of colleges and universities can be evaluated through the use of their financial information compared to the effect of inflation and student enrollment expressed in FTE terms. Thus, financial reports should include multi-year financial statistics in conjunction with applicable price level changes (Chan & Snyder, 1979). This would permit the comparison of financial and nonfinancial statistics of individual and groups of institutions related to internal variables (management of financial resources) and external variables (enrollment trends, the effects of inflation, and trends in other sources of revenue different from tuition) that influence the economic viability of higher education institutions (Dickmeyer & Hughes, 1980, 1982b; Minter et al., 1982; Minter & Bowen, 1975, 1977, 1978, 1980).

FINANCIAL ANALYSIS TOOLS FOR INSTITUTIONS OF HIGHER EDUCATION

Overview

The preceding sections of this chapter were aimed at establishing a financial and economic framework for the selection of the most appropriate instruments for the measurement of the financial health and wealth of higher education institutions. Chapter I has already described some of these financial analysis tools. Such a description will be expanded in this section with emphasis on the implications of ratio and trend analysis in determining the financial status of private higher education institutions.

The achievement of comparability of financial statements was only the beginning in an attempt to make financial information more understandable. The interpretation, analysis, and understanding of financial data requires concrete suggestions for specific data, data relationships, ratios and other criteria that might help evaluate the financial health of higher education institutions (Robinson, 1975).

The differences existing between profit and nonprofit organizations, and between the accounting systems of higher education and business organizations have also determined the differences in the financial evaluation of both types of institutions. Business organizations do not use fund accounting and measure their benefits or losses in terms of money. Therefore, to use the business financial ratios to evaluate institutions of higher education will be useless, even when there have been some attempts for operating the higher education financial statements as those of business enterprises (Robinson, 1975). Besides, the attempts to apply business financial analysis to fund accounting statements have not been successful. (The NCHEMS employed this financial analysis approach and obtained unsatisfactory results.) Even when nonprofit financial analysis can be applied to fund accounting statements and business financial analysis can be applied to consolidated statements for nonprofit organizations, there must be an agreement on what is consolidated, what is included in each term, and how each element is expressed in a given formula. For example, through use of the consolidated balance sheet and the flow of funds statements, it is feasible to calculate working capital ratios, and liabilities to assets or fund balance ratios can be performed as well as liquidity analysis. However, the main objective is the achievement of comparability among institutions and to establish the trend lines in the data of the reporting institution itself (Wilkinson, 1979).

One of the principal limitations to higher education financial analysis and institutional comparability is the basic concept in fund accounting of unrestricted versus restricted funds. This factor tends to obfuscate the information contained in an institution's financial statement. The management style applied to restricted and unrestricted funds and the individual definitions of what is restricted and what is unrestricted also create confusion. While it is possible to know whether a restriction applies to the amount of money to be spent, the purposes of the expenditure, and who can impose the restriction (Wilkinson, 1979), higher education institutions budget and use restricted funds as if they were unrestricted and unrestricted funds as if they were restricted (Collier & Allen, 1980; Minter & Conger, 1979; Wilkinson, 1979).

According to accrual accounting principles, restricted funds should be reported as deferred revenues because they constitute a liability that becomes earned revenue when the condition of the restrictions have been fulfilled (Collier & Allen, 1980; NACUBO, 1982a; Wilkinson, 1979). Wilkinson (1979), criticizing this position wrote:

> Traditionally, however, restricted monies are treated as fund balances--as if they were working capital belonging to the institution--but they are not accounted for until they are considered spent. This treatment is one of the most irrational and confusing aspects of fund accounting.
>
> The significant question about restricted funds is their separate accountability. One must ask not only whether they are spent for the specified purpose but also whether they are required to be spent in addition to any unrestricted funds that are already going for the same purpose or can be used in place of such funds (p. 202).

Despite these limitations indicated by Wilkinson (1979), and as previously indicated in this chapter, it is possible to combine the restricted and unrestricted amounts of assets and liabilities of fund balances with the condition that all interfund borrowing transactions are reported in the balance sheet (Collier & Allen, 1890; NACUBO, 1982a, 1982b). Researchers such as Minter and Bowen (1975, 1977, 1978, 1980) used this approach for the study of the trends in the financing of private education in the United States and obtained consistent and reasonable results. The combination of restricted and unrestricted fund balances reduces the risk of financial misinformation due to the understatement or overstatement of restricted or unrestricted fund balances in both categories. The problem created by the many yearly non-mandatory interfund transfers can be avoided through the aggregation of funds into a specified fund balance group. And, finally, the effect of interfund borrowing can be properly determined in comparison to the effect of external borrowing (Jenny, 1979; Minter, 1980).

Financial Indicators in Higher Education

Most current financial evaluations reflect a new set of concerns for higher education institutions in the 1980s. Research works done on the financing of higher education institutions show that most colleges and universities have been remarkably sensitive to economic adversity such as inflation and decline in real resources. However, they have served more students, preserved the quality of their programs, and offset current budgets only by deteriorating their capital support of physical, financial reserves, and human resources. Consequently, the interpretation of

An unrestricted current fund ratio above two reveals adequate unrestricted current funds assets to prevent immediate or short-term financial difficulties. An unrestricted current fund ratio below two reveals a weakness in the immediate or short-term financing by current funds expenditures and transfers (Collier & Allen, 1980; Minter & Conger, 1979b; Dickmeyer & Hughes, 1982b; Wilkinson, 1979).

Available Funds Ratio. This ratio is used to evaluate the intermediate term available financial resources provided by the unrestricted current fund balance of quasi-endowment funds. These quasi-endowment funds can be used at the discretion of the governing board. Thus, this ratio is calculated to measure the institutional financial reserves as related to educational and general expenditures and mandatory transfers. The ratio is calculated by dividing the unrestricted current fund balance plus quasi-endowment (market value) by educational and general expenditures and mandatory transfers. A ratio of one-half would mean that the institution has sufficient financial reserves to cover its operations without depending on revenues. A limitation to the use of this ratio are the reserves the institution may have in other funds (such as plant funds) that may compensate for a decline in fund balances in the current and quasi-endowment funds (Dickmeyer & Hughes, 1982b).

Endowment Ratios (Long-term). This ratio compares the amount of the endowment fund (including quasi-endowment) at market value to the amount of current yearly expenditures.

financial ratios without consideration of the capital base of the institutions can lead to an understanding of financial difficulties threatening the institutions, such as the stringency caused by the depletion of institutional financial resources (Frances, 1980).

This circumstance has fostered the development of indicators leading to the judgment of financial conditions and trends in financial resources of higher education institutions. Thus, the understanding of the institutional financial structure, the consideration of internal and external factors affecting the institutional financial structure, the feasibility of making reasonable comparisons among institutions, and the selection of appropriate indicators for the assessment of financial condition, constitute the basic framework for the design of adequate methodology for higher education financial analysis (Chan & Snyder, 1979; Dickmeyer & Hughes, 1982a, 1982b; Minter et al., 1982).

Ratio analysis provides a perspective on key financial conditions affecting institutional activity, defines trends in the financing of higher education institutions (Minter et al., 1982), and permits the development of a financial profile based on the relationship existing among financial and nonfinancial statistics (Dickmeyer & Hughes, 1982b). Thus, the design of such statistics must take into account the evaluation of current strategies and the planning of new strategies. Such strategies imply a balance between risks and resources in such a way that the institution can be protected from revenue fluctuations--declines in applications and enrollments and/or decreases in the contributions of other sources of revenue. To overcome this circumstance, the institution must keep an adequate level of revenues in its fund reserves. Strategies must maximize revenue performance and minimize increase in risk. Besides, institutional strategies involve establishing expenditure patterns in accordance with overall institutional goals (Dickmeyer & Hughes, 1980).

Financial risk is determined by the susceptibility of an institution's financial stability to the environment in which it operates. Consequently, the analysis of financial condition, performance, and creditworthiness (Minter et al., 1982) must consider the evaluation of availability of financial resources; flexibility to minimize risks; nonfinancial resources (such as students, institutional attraction, academic programs, faculty, staff, and physical plant), and changes in the revenue-expenditure patterns. Statistics relating to nonfinancial resources can reflect changes not detectable through the standard financial analysis (Dickmeyer & Hughes, 1980, 1982a, 1982b; Minter et al., 1982; Minter & Bowen, 1977, 1980).

Evaluation of Financial Condition

The ratios to be used for the evaluation of the financial conditions of higher education institutions must include information about the financial health at a given point in time and the trend line in the financing of the institution compared to preceding years' financial performance (Minter et al., 1982).

Several key ratios have been developed for assessing of financial conditions. Dickmeyer and Hughes (1982b), in their work "Financial Self-Assessment: A Workbook for Colleges," developed a set of ratios to evaluate financial conditions. Such ratios are purposed for evaluating financial resources, flexibility, nonfinancial resources, and changes affecting financial resources and are discussed below.

Assessment of Financial Resources

Dickmeyer and Hughes (1982b) propose three basic ratios for the evaluation of financial resources in the short, intermediate, and long term: the unrestricted current fund ratio, the available fund ratio, and the endowment ratio.

Unrestricted Current Fund Ratio. This ratio measures the sufficiency of the unrestricted current assets to pay off the short-term unrestricted liabilities. Restricted funds, including assets and liabilities, are excluded from this calculation. Generally, this ratio is computed by dividing unrestricted current assets by unrestricted current liabilities (Dickmeyer & Hughes, 1982b).

Nevertheless, the application of this ratio is often questioned because of the many limitations underlying the determination and use of unrestricted and restricted funds.

An unrestricted current fund ratio above two reveals adequate unrestricted current funds assets to prevent immediate or short-term financial difficulties. An unrestricted current fund ratio below two reveals a weakness in the immediate or short-term financing by current funds expenditures and transfers (Collier & Allen, 1980; Minter & Conger, 1979b; Dickmeyer & Hughes, 1982b; Wilkinson, 1979).

Available Funds Ratio. This ratio is used to evaluate the intermediate term available financial resources provided by the unrestricted current fund balance of quasi-endowment funds. These quasi-endowment funds can be used at the discretion of the governing board. Thus, this ratio is calculated to measure the institutional financial reserves as related to educational and general expenditures and mandatory transfers. The ratio is calculated by dividing the unrestricted current fund balance plus quasi-endowment (market value) by educational and general expenditures and mandatory transfers. A ratio of one-half would mean that the institution has sufficient financial reserves to cover its operations without depending on revenues. A limitation to the use of this ratio are the reserves the institution may have in other funds (such as plant funds) that may compensate for a decline in fund balances in the current and quasi-endowment funds (Dickmeyer & Hughes, 1982b).

Endowment Ratios (Long-term). This ratio compares the amount of the endowment fund (including quasi-endowment) at market value to the amount of current yearly expenditures.

Endowment income constitutes a significant source of revenue, especially for private universities. Thus the trend in this ratio permits the observation of decline or growth in this long-term investment fund as related to the trends in educational and general expenditures and mandatory transfers. The endowment ratio constitutes a long-term financial resource measure. A limitation to this ratio is its superficial measurement of the overall health of the institution. Although some institutions may pledge endowments against loans, increases in endowment funds are not thus relevant to prevent financial difficulties (Dickmeyer & Hughes, 1982b).

Assessment of Flexibility. As for the measurement of flexibility, Dickmeyer and Hughes (1982b) suggest three basic ratios for evaluation of the institution's financial resources sufficiency to face the debilitating effects of the fluctuation in revenues and expenditures. These three ratios are: (a) the debt service to revenue ratio that measures the amount of income not available for the buildup of other resources; (b) the acceptance rate that measures the admissions policies of the institutions; and (c) the tenured faculty ratio that measures the administration's freedom for the implementation of budget changes through the change of teaching staff size (Dickmeyer & Hughes, 1982b).

Working Capital Ratio. This ratio measures the relationship between the unrestricted current fund balance and the educational and general expenditures. Thus, the flexibility of the institution to face increases in expenditures can be debated. It usually expresses the unrestricted current fund balance as a percentage of educational and general expenditures. Nevertheless, this ratio has the limitations underlying the classification of restricted and unrestricted funds (Minter, Conger, 1979b).

Debt Service to Revenue Ratio. This ratio evaluates the flexibility of the institution to pledge revenues to resources rather than to debt since (principal, interest, and sinking funds payments) increases in the burden of debt service will create revenue deficits for the allocation to other financial and nonfinancial needs. This ratio is calculated by dividing the amount of debt service by the total current fund revenues. A limitation to this ratio is the variation of the willingness and ability among institutions to commit revenues to debt service. Thus, national standards for percentage of budget may not be inferred from the median values of this ratio (Dickmeyer & Hughes, 1982b). Minter et al. (1982) consider a similar ratio by dividing the debt service amount by the unrestricted current revenues amount for the evaluation of institutional financial performance. However, this ratio is limited by the difficulties for determining restricted and unrestricted funds (Collier & Allen, 1980; Minter & Conger, 1979b; Wilkinson, 1979).

Acceptance Rate. This nonfinancial ratio measures the relationship of first-time student acceptances (freshmen and transfers) to total student applications. This ratio is determined by dividing acceptance of freshmen and transfers by application from the previous year. Acceptance rates approaching 100 percent indicate a reduced flexibility in the admissions policies; thus, there exists little possibility for the maintenance of enrollments by decreasing standards. Consequently, larger financial reserves may be needed as a form of contingency protection (Dickmeyer & Hughes, 1982b).

Tenured Faculty Ratio. This nonfinancial ratio indicates the changes in the flexibility to formulate budget reductions. Budget inflexibility is determined by expenditures for long-term contracts that occupy an increased portion of the budget. Such expenditures limit the possibilities to change long-term budget composition. This ratio is calculated by dividing the number of tenured faculty or faculty with contracts longer than five years by the number of FTE faculty in the fall semester. This ratio has the limitation that many other commitments serve to decrease budget flexibility, including debt service, insurance, salaries of key administrators, employee benefits and expenditures for utilities (Dickmeyer & Hughes, 1982b).

Effect of Potential Enrollment Decline. This nonfinancial statistic measures the impact of changes in overall enrollment because of changing demographics on the building of financial resources, evaluation of marketing strategies, and budget reduction possibilities. This indicator is obtained by multiplying the total of tuition and fees by the percentages of change in enrollment (1980 =

100). The limitation to this statistic is that enrollment projections are not based on actual data (Dickmeyer & Hughes, 1982b).

Assessment of Nonfinancial Resources

In the evaluation of nonfinancial resources, Dickmeyer and Hughes (1982b) suggest the calculation of ratios relating to the academic program, such as instruction proportion, and instruction per FTE student, and student to faculty ratio.

Instruction Proportion. This statistic is computed by dividing the total of instruction expenditures by educational and general expenditures and mandatory transfers minus restricted fund scholarships. This statistic indicates the emphasis of the institution on instructional activities. In many cases the priority for instruction is affected by the need to intensify the fund raising program and emphasize the recruiting activity. The limitations to this statistic are determined by its inability to assess changes in quality. Even when this statistic shows decline, increasing operating efficiency may result in general quality increases. Thus, a decrease in instructional expenditures may not indicate an absolute decline (Dickmeyer & Hughes, 1972b).

Instruction per FTE Student. This statistic is calculated by dividing the amount of instructional expenditures in constant dollars by the FTE student enrollment in the fall semester of the year for which the calculation is being made. Since this is a measure of the instructional cost per student, a decline in this indicator, for example, means that the students are receiving less (on a cost basis) from the academic program. An increase in this indicator means that more resources are being accumulated in the academic program in comparison to the general budget. Another possibility for an increase in the cost of instruction per FTE student is that the number of students have remained stable. Whether the institution continues financially healthy at any level of activity, an increase constitutes a positive indicator of increased commitment of resources to the primary program. The limitations to this indicator are the same as those of instruction proportion (Dickmeyer & Hughes, 1982b). This indicator in constant dollars may be compared to the instructor per FTE student in current dollars and to the total instructional expenditures to detect the effects of inflation, enrollments, and the input of real resources (constant dollars) per FTE student (Halstead, 1983).

A full-time equivalent student is defined as the amount of (or institutionally agreed to amount for) students enrolled full-time during a given period. It is generally computed as full-time students plus one-third of part-time students (Dickmeyer, 1983).

Student to Faculty Ratio. This ratio is computed by dividing the number of FTE students by the number of FTE faculty. This ratio may be compared to faculty salary trends, and/or trends in instructional expenditures in order to determine resource allocation of faculty. A limitation to this ratio is that it reflects only problems caused by the effects of inflation on real salaries or by the increase of average class sizes (Dickmeyer & Hughes, 1982b).

Assessment of Changes Affecting Financial Resources

As for the evaluation of the changes affecting financial resources, Dickmeyer and Hughes (1982b) suggest the use of ratios for the calculation of student-derived revenue trends, government-service inflow proportion, analyses of trends in revenues derived from diverse sources, trends in expenditures per FTE student. Trends in expenditures and mandatory transfers are also suggested by Dickmeyer and Hughes for the evaluation of changes in financial resources.

For the analysis of the student derived revenue trends, Dickmeyer and Hughes (1982b) suggest calculating the financial FTE enrollments and the tuition discount factor.

Financial FTE Enrollments. This statistic is calculated by dividing the net student revenue--tuition and fees minus scholarships and fellowships from unrestricted funds --by the average tuition and fee rate per year for a full-time student both in current dollars. This indicator is considered to be more useful than the fall enrollment count and measures the trends in full-time tuition payers.

Tuition Discount Factor. This ratio indicates the difference between the financial enrollment and the fall FTE enrollment. This calculation is made by dividing the financial FTE enrollments by the total of FTE students. Both the financial FTE and the tuition discount factor have the limitation that enrollment changes can be caused by factors different from tuition prices (Dickmeyer & Hughes, 1982b).

Government Derived Inflow Proportion. This indicator is computed by dividing the total government-related inflows by the total current fund revenues. Changes in this proportion may indicate the trends in the revenue strategy of the institution and an increase in risk. The perception of the influence of this factor depends on the private or public character of the institution. As for private institutions, increasing dependence on government-derived revenues implies that government revenues are replacing or supplementing other revenues (or both). Thus, further investigation is needed for the detection of declines in other sources of revenues, such as gifts and funds from parents. A limitation to this statistic is that some scholarship aid is not given directly to the institutions, but is used for the students to pay off-campus expenses. Therefore, this ratio may be partially inflated (Dickmeyer & Hughes, 1982b).

Expenditures per Student (Student Cost). This ratio indicates the trends in spending per student in relation to problems with budget control and changes in efficiency. Large increases indicate inability to adjust expenditures to change in enrollment size. Unless revenues keep pace with expenditures, the institution will lose resources. In terms of constant dollars, decline in this per pupil expenditure is a possible measure of increased efficiency, while an increase may mean decreasing efficiency. This is because (1) the revenue is not keeping pace with inflation and the institution is providing more services, or (2) the institution's internal inflation is higher than the national inflation. This ratio is computed by dividing the total educational and general expenditures plus mandatory transfers by the FTE enrollment (fall). The student cost in constant dollars is obtained by dividing the student cost in current dollars by the HEPI (Dickmeyer & Hughes, 1982b).

Dickmeyer and Hughes (1982b) emphasize the use of data from the statement of current funds revenues, expenditures and other changes--which is more related to the assessment of financial performance than to financial conditions (Minter et al., 1982; Minter & Conger, 1979b)--and the utilization of nonfinancial statistics; thus, many aspects related to the fund groups are neglected.

Dickmeyer and Hughes did not establish an approach for the assessment of interfund operations, such as interfund borrowing, combination of restricted and unrestricted assets and liabilities, the use of restricted funds, and the relationship between the total fund balances and the total expenditures. Moreover, the emphasis on the evaluation of unrestricted current funds--including assets and liabilities of this fund group, nonfinancial statistics, and revenue expenditure patterns--does not permit a comprehensive analysis of the financial structure of the institution. Even when an evaluation of the endowment fund group is suggested in combination with the unrestricted current fund balance, the interfund operations, the difficulties of an accurate statement of restricted and unrestricted funds, and the omission of the possibility of combining these two funds tend to confound the analysis (Minter, 1980; Minter & Bowen, 1978; Minter & Conger, 1979; Collier & Allen, 1980; Wilkinson, 1979).

Accordingly, by a more extensive examination of the balance sheet fund groups, the analysis can provide a more comprehensive perspective of the institution's financial health. Thus, the use of indicators that consider the inclusion of restricted and unrestricted funds and the combination of both reinforces the analysis of available financial resources proposed by Dickmeyer and Hughes (1928b). Consequently, additional ratio analyses can be performed to evaluate the availability of financial resources. In the short-term, the ratio's current assets to current liabilities and liquid assets to current liabilities (Minter & Bowen, 1978) would supplement or substantiate the statistical information obtained from the unrestricted current fund ratio, available fund ratio, and endowment market value (Dickmeyer & Hughes, 1982b). These ratios are described as follows:

Current Ratio. This ratio indicates the ability of higher education institutions to pay off their current obligations by means of assets that can be readily liquidated. It is computed by dividing the total current assets by the total current liabilities. This calculation does not distinguish between the concept of restricted and unrestricted funds (Minter & Bowen, 1978). The interpretation of this ratio is similar to that of the unrestricted current fund ratio (Dickmeyer & Hughes, 1982b) and applicable for the same purposes (Minter & Bowen, 1978).

Liquidity Ratio. This ratio is equivalent to the liquidity ratio (acid test) used in business financial analysis. It refers to all the liquid assets included in the current fund, plant funds, and reserve funds. This ratio indicates the immediate availability of funds to pay off current obligations (Minter & Bowen, 1978) and can be applicable for the evaluation of short-term financial resources.

Equity Ratio (Total Assets to Total Liabilities). This ratio indicates the degree to which the institutions hold equity in their assets by measuring the relationship between assets and liabilities. This ratio should correlate negatively with the degree of indebtedness. The higher the value of this ratio the more favorable the level of total fund balances (Minter & Bowen, 1978).

The ability of the institutions to accumulate financial reserves and subsequently attain a healthy financial condition can be measured through the use of the following ratios (Minter, 1980; Minter et al., 1982):

- viability ratio or expendable fund balances to plant debt;
- plant equity ratio or plant equity to plant debt;
- ratio of expendable fund balances to total expenditures;
- ratio of capital fund balances to total expenditures or non-expendable fund balances to total expenditures.

Viability Ratio or Expendable Fund Balances to Plant Debt (Minter, 1980; Minter et al., 1982). This ratio reflects the relationship between the total fund balances of all expendable funds and the balance of outstanding debt related to the financing of plant assets by the end of the fiscal year. The expendable fund balances consist of current funds, quasi-endowment funds, unexpended plant funds, funds for renewal and replacement, funds for retirement of plant indebtedness, including in each case restricted and unrestricted funds (Minter, 1980). Plant debt includes liabilities whose related assets are investment in plant (Minter, 1980). This concept includes bonds payable, notes payable, mortgages payable, and amounts due to other funds (Collier & Allen, 1980). This ratio is obtained through the division of expendable fund balances by the amount of plant debt. Plant debts whose related assets are cash or assets converting to cash in the normal course of operations are excluded from this calculation. A ratio of

1:1 or greater would mean that the institution has sufficient expendable fund assets available to finance all related liabilities plus plant debt (Minter, 1980).

This ratio may constitute an adequate indicator for the verification of the conclusions drawn from the ratio of current revenue to debt service suggested by Dickmeyer and Hughes (1982b). This procedure would permit a comparison between expendable funds as related to outstanding plant debt (Miner, 1980) and revenues as related to the payment of principal, interest, and restricted funds objectives for the payment of long-term debt (Dickmeyer & Hughes, 1982b).

Plant Equity Ratio or Plant Equity to Plant Debt (Minter, 1980; Minter et al., 1982). This ratio measures the relationship between the excess of the costs of plant assets over related plant debt (equity). This ratio is computed by dividing the net investment in plant--investment in plant assets (land, buildings, equipment, library collections, and the like) minus related liabilities--by plant debt whose related assets are invested in plant. This calculation excludes debts whose related assets are cash or assets that can be liquidated in the normal course of business. This ratio may indicate the possibility of increased or declining long-term borrowing power. A ratio lower than 3:1 would provide little margin for securing substantial additional long-term loans (Minter, 1980). Similar to the viability ratio, the plant equity ratio (Minter, 1980; Minter et al., 1982) may be applied in conjunction with the flexibility measure, debt service to revenue ratio (Dickmeyer & Hughes, 1982b). This procedure would permit a more comprehensive perspective on the relationship between financial resources and long-term debt.

Expendable Fund Balances Ratio or Expendable Fund Balance to Total Expenditures (Minter, 1980; Minter et al., 1982). This ratio measures the relationship between expendable fund balances and total current fund expenditures and mandatory transfers. This ratio is useful to supplement the analysis of the viability ratio. In the case of a small plant debt, it is possible to obtain a high viability ratio even though its expendable fund balance is relatively reduced. On the other hand it may be reasonable to expect an increase in expendable fund balance at least in proportion to the rate of growth of operating size. Probably a ratio of 3:1 or greater would be required to provide a reinforcement for the viability ratio to a significant extent (Minter, 1980). The same criteria could be applicable for a review of the results of the available fund ratio proposed by Dickmeyer & Hughes (1982).

The expendable fund balances ratio is computed by dividing all the expendable fund balances by the total current fund expenditures plus mandatory transfers (Minter, 1980; Minter et al., 1982).

Ratio of Capital Fund Balances to Total Expenditures or Nonexpendable Fund Balances to Total Expenditures (Minter, 1980). Nonexpendable or capital fund balances include those resources that cannot be expended by being relatively externally restricted; however, they can provide present or future benefits to the institution. These funds include restricted and unrestricted loan funds, endowments and term endowment funds, and annuity and life income funds. The reason for the inclusion of unrestricted loan funds is that these amounts are not expendable until loans are collected and assets transferred to other uses (Minter, 1980). This ratio is computed by dividing nonexpendable or capital funds by total current fund expenditures and mandatory transfers. This ratio measures the trends in changes in capital funds in relation to changes in operating size to detect the benefits of these capital funds that can be provided to the institution. Thus, capital funds must increase as the size of the operation increases for a continued financial contribution to the institutional financial resources. Examples of these benefits are those loans that help the students finance their tuition and fees, and deferred giving that in the long-term will become available for institutional use. Since private institutions are more likely to have significant capital funds than public institutions, preliminary data would indicate that this ratio will generally amount to twice that of the expendable funds balances ratio. The significance of this ratio is relevant when it is greater than 1:1, especially when the expendable fund balances ratio is below or equals 1:1.

The viability ratio, the plant equity ratio, the ratio of expendable fund balances, and the ratio of capital fund balances to total expenditures as indicators of financial condition, ideally should show relations of over 1:1; the greater the value of these ratios the more favorable the financial condition (Minter, 1980). The same criteria may be applicable to the two basic indicators of short-term financial solvency, the current fund ratio and the liquidity ratio; and the indicator of the degree of fund balances equity, total assets to total liabilities ratio (Minter & Bowen, 1978).

Evaluation of Financial Performance

The statement of current funds revenues, expenditures and other changes shows the financial performance of a given higher education institution for the entire fiscal year or period being assessed. This financial statement, which summarizes all the earned revenues by source and all the incurred expenditures by functional purpose, provides the necessary information for the detection of: (a) the ability of the institution to live within its means during the year being reported on, and (b) the clarification of operating results and the provision of hints as to the factors underlying financial conditions, reflected in the balance sheet ratios (Minter, 1980; Minter & Conger, 1979b; Minter et al., 1982).

The ability of a higher education institution to live within its means is indicated through the application of net operating ratios expressed as percentages.

These operating ratios are net total revenues to total revenues, net educational and general revenues to total educational and general revenues and net educational and general revenues to total educational and general revenues (Minter, 1980; Minter et al., 1982).

Net Total Revenues to Total Revenues. This ratio indicates whether the operations of a higher education institution generated a surplus or a deficit. In general terms, the larger the surplus--excess of revenues over expenditures--the more favorable the financial position of the institution. Large deficits--excess of expenditures over revenues--are generally a sign of financial difficulty, especially when they occur in successive fiscal periods. This ratio provides the most concise expression of the ability of an institution to live within its means during the period being reported on. The net total revenues to total revenues ratio is generally expressed as a percentage. It is calculated by dividing net total revenues--total current fund revenues minus total current fund expenditures and mandatory transfers--by total revenues, excluding transfers (Minter, 1980).

Net Educational and General Revenues to Total Educational and General Revenues. This ratio indicates the sufficiency of the revenues for the support of the academic mission of the institution--as related to the expenditures required for the fulfillment of the functions of instruction, research and public service. Net educational and general revenues are determined by the difference between total educational and general revenues minus total educational and general expenditures and mandatory transfers.

Total educational and general revenues include tuition and fees, government revenues, private gifts, grants and contracts, sales and services of educational activities, contributed services and other revenues. Revenues derived from auxiliary enterprises, intercollegiate athletics, hospitals, and independent operations are excluded (Minter, 1980).

The ratio net educational and general revenues to total educational and general revenues is computed by the division of net total educational and general revenues by total educational and general revenues. This ratio is an indicator of the components of the institution's operation that influences surpluses or deficits (Minter, 1980).

Net Auxiliary Enterprise Revenues to Auxiliary Enterprise Revenues Ratio. This ratio indicates whether the revenues supporting auxiliary enterprises were sufficient to cover the expenditures and mandatory transfers for those services. Frequently, auxiliary enterprises show substantial imbalances, on some occasions generating substantial surpluses, in other cases significant deficits. The usual management of these types of revenues seeks for a break-even result because large deficits will have to be financed by sources assigned for instruction--for example, tuition fees and endowment income--and large surpluses may result in complaints from students that the institution is overpricing food and shelter (Minter, 1980).

This ratio is computed by dividing net auxiliary enterprise revenues--total auxiliary enterprise revenues minus total auxiliary enterprise expenditures and mandatory transfers--by total auxiliary enterprise revenues. Net auxiliary enterprise revenues exclude educational and general, intercollegiate athletics, hospitals, and independent operation revenues, expenditures and mandatory transfers and all non-mandatory transfers. Total auxiliary enterprise revenues include the bookstore, union, residence halls, food services, and other self-supporting activities for students, faculty, and staff. Revenues derived from educational and general, intercollegiate athletics, hospitals, and independent operation revenues are excluded (Minter, 1980).

The clarification of operating results and the provision of hints as to the factors underlying financial conditions reflected in the balance sheet ratios are determined through the application of the contribution and allocation or demand ratios (Minter, 1980). Both contribution and demand ratios permit the detection of factors underlying the behavior of the financial sheet ratios (Minter et al., 1982).

Contribution Ratios. These ratios derive from the main sources of revenue--tuition and fees, Federal government revenues, state government revenues, local government revenues, private gifts, grants and contracts, and endowment income (Minter et al., 1982). These concepts were already described in the section relating to revenue structure. In each case the contribution is expressed as a percentage of total educational and general expenditures and mandatory transfers. An optional approach is the expression of the total of these revenue sources as a percentage of total revenues; however, this alternative may generate misleading conclusions, since the result will not permit the detection of the particular contribution of each source of revenue in terms of increases and declines in the respective proportions. These ratios are calculated by dividing the amounts of each of the educational and general sources of revenue by the total of educational and general expenditures and mandatory transfers and then multiplied by 100. This ratio permits the detection of which component(s) of the institution's operation accounts for a determined surplus or deficit (Minter, 1980).

Demand or Allocation Ratios. Similar to the contribution ratios, the demand ratios permit the detection of which component(s) of the institution's operation accounts for a specific surplus or deficit (Minter, 1980). These ratios are derived from the eight basic categories of educational and general expenditures: instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, and scholarships and fellowships (Minter, 1980; Minter et al., 1982).

In each case the ratios are expressed as percentages of total educational and general expenditures and mandatory transfers or as a percentage of the total educational and general revenues. These indicators are especially useful in trend analysis for the determination of increases or declines in the proportions of the above-named functional categories in relation to the total of educational and general expenditures and mandatory transfers. For the calculation of these ratios, each functional category is divided by the total educational and general expenditures and mandatory transfers or by the total educational and general revenues and then multiplied by 100 (Minter, 1982; Minter et al., 1982).

Evaluation of Creditworthiness

This assessment of creditworthiness permits the detection of key factors that enable a higher education institution to repay its debts. The lack of a solid capital base reveals vulnerability in the financial condition of an institution despite nonfinancial resources or hidden assets that provide support to the institution and that may compensate for that weakness (Minter et al., 1982).

The analysis of historical trends gives the creditors a perspective on the future operations of the institution.

Although fundamental to the analysis of the borrowing power of any institution seeking credit, creditworthiness is essentially a matter of judgment. Thus, an institution may not be clearly healthy from the financial point of view; nevertheless, a creditor's concerns are satisfied whether or not the institution demonstrates the possession of proven means to repay the debt (Minter et al., 1982).

Accordingly, the creditors will be concerned with the ability of the institution to repay the indebtedness being assumed, and the estimation of the degree of risk relating to this indebtedness. Consequently, the use of two financial ratios and two nonfinancial based ratios is suggested. These indicators are described below (Minter et al., 1982):

Financial Ratios.

Total assets to total liabilities (Equity Ratio). (Minter & Bowen, 1978). The purpose of this ratio is to show the degree of equity that the institution holds in its assets. As previously noted, this indicator should correlate negatively with the degree of indebtedness (Minter & Bowen, 1978, 1980) and should reflect the solidity of the capital base (Minter et al., 1982).

Debt service to unrestricted current funds revenues (Minter et al., 1982) or debt service to current funds revenues (Dickmeyer & Hughes, 1982b). This ratio as a measure of financial flexibility was studied previously as a risk measure. Increases in this ratio show a decline of budget flexibility as a consequence of a rising long-term debt. Decreasing ratios will indicate a decline in long-term debt commitment. The lower the debt service to revenue ratio, the higher the budget flexibility (Dickmeyer & Hughes, 1982). This indication basically constitutes a measure for institutional financial risk (Minter et al., 1982).

When calculating this ratio, it is important to observe the limitations related to the classification of restricted and unrestricted items; consequently, the use of total current revenues seems more reliable in relation to the previous analysis.

Nonfinancial Ratios. The measure of enrollment is relevant given the primary purpose of the institution is to serve students. Thus, total enrollment is a key element in the evaluation of institutional financial viability. The creditor is generally interested in data such as total enrollment; components of enrollment, such as full-time and part-time students; and the trends in patterns of enrollment (Minter et al., 1982). The stability of revenues derived from students depends on factors such as steady enrollment levels, the trends in tuition rates as associated with inflation, student aid from unrestricted funds, and the influence of extra enrollments on the generation of sufficient revenues for financing extra costs, as indicated by inflationary trends (Dickmeyer & Hughes, 1982b).

Particularly in the case of private institutions, the creditor will emphasize some key aspects for the analysis of the institution's ability for debt repayment. These key aspects are the degree of institutional dependence on enrollment, the policy of the institutions providing for the maintenance of stable enrollments, and the sufficiency of capital base (viability conditions) for the support of this policy. Additional aspects, such as student financial aid base, and the percentage of average student needs fulfilled by the institution may require the examination of the related statistics--scholarships and fellowships for judgment of creditworthiness (Minter et al., 1982)

Thus, the ratio of student matriculants to completed applications, and opening fall FTE enrollments present year to opening enrollments base year can measure trends in enrollment required for this analysis (Minter et al., 1982), and reinforced with statistics such as financial FTE enrollments and Tuition Discount Factors (Dickmeyer & Hughes, 1982b).

Table 15 shows a summary of the ratios computed by Minter and Bowen (1975, 1977, 1978, 1980) for the period 1970-79.

Trend Analysis

The analysis of trends in revenues derived from the diverse sources, expenditures per FTE student in current and constant dollars, and trends in expenditures and mandatory transfers in current and constant dollars permits the

Table 15

Summary of Selected Financial Ratios of Private Higher Education Institutions, Fiscal Years 1973-74 to 1978-79

Ratios
Current ratio: current assets/current liabilities
Liquidity ratio: liquid assets/current liabilities
Equity ratio: total assets/total liabilities
Net total revenue to total revenue
Net E&G revenue to total E&G revenue
Net auxiliary enterprises revenue to auxiliary enterprises revenues

Note: Adapted from Independent Higher Education: Annual Reports on Finan
Educational Trends in the Independent Sector of American Higher Edu
by J. W. Minter and H. R. Bowen (Eds.), (National Association of In
Colleges and Universities [NAICU]), 1978, 1980.

	Fiscal Years					
	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
	1.3	1.3	1.5	1.5	1.3	1.3
	0.7	0.6	1.4	1.8	1.3	1.3
	5.0	5.4	5.5	5.8	--	--
	1.9	1.9	3.3	2.4	1.7	2.0
	0.5	0.6	2.6	2.3	2.9	3.7
revenues	--	--	--	1.4	1.2	2.9

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evaluation of strengths and weaknesses in the revenue expenditure strategies of higher educational institutions.

Declines or increases in the diverse components of the revenue structure, such as revenue from tuition and gifts, government support, and trends, show an increased dependence on tuition income.

As a limitation to this analysis, changes in revenue dependence are not necessarily positive or negative. These trends only reflect changes in revenue strategy, intended or unintended, and require further investigation (Dickmeyer & Hughes, 1982b).

The trends in expenditures per FTE student can indicate problems with budgetary control and efficiency. Large increases may indicate inability to adjust expenditures to shifts in the size of the student body. These increases may be offset by equal revenue increases on a per student basis; otherwise, the institution will lose resources. This calculation implies the determination of unit costs per FTE student in terms of current and constant dollars. The HEPI is generally used to deflate the amounts for the conversions into constant dollars. This measure shows the following limitations: (a) large fluctuations may indicate that budgetary response to enrollment change is deficient or enrollment is not being controlled; (b) educational and general expenditures do not provide an adequate measure of the total services available to students; and (c) given the diverse effect of inflation on different institutions and the range of program offerings, management styles, and other services offered, comparability among institutions is very limited (Dickmeyer & Hughes, 1982b).

The analysis of trends in expenditures will detect the major changes in expenditure allocation according to the functional expenditure categories. These categories are: instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, scholarship and fellowships from unrestricted funds, mandatory transfers, and total educational and general expenditures (excluding restricted student aid). Declines or increases in the proportion spent in any area indicate shifts in institutional priorities for that function. Usually graphic representations such as bar graphs are used to illustrate the trends. A major limitation to this kind of analysis is that the condition of the institutions cannot be revealed by these graphic representations. They can only show expenditure patterns during a given period of time (Dickmeyer & Hughes, 1982b).

By considering external variables, such as the prices of the general economy as measured by the CPI, the family income as measured by the Family Median Income Index (Halstead, 1983), the trends in the GNP as measured by the GNPIPD (Hughes, 1982), a comparison of the internal institutional data to national inflationary trends can be made (Dickmeyer & Huges, 1982b). (The use of these data was already studied in the section related to the national trends in the financing of higher education.)

Consideration of the trends in assets, liabilities and fund balances has been demonstrated to be a crucial factor in the determination of the capital condition of the institutions. The analysis of trends in the components of the balance sheet structure facilitates the detection of favorable or unfavorable changes in the fund groups structure as well as in the overall capital base of the institutions (Minter & Bowen, 1980). The trends in the financial ratio related to the balance sheet structure will provide a condensed view of the changes in the capital side of the institution (Minter & Bowen, 1980). Thus the evolution of foci of weaknesses and strengths in the financial status of the institution can be observed and related to the factors underlying such a financial status and related indicators (Minter, 1980; Minter et al., 1982).

Sources and Uses of Funds. The sources and uses of funds by higher education institutions are reported in the statement of changes in fund balances (previously described in the financial reporting section of this chapter). A major limitation to the analysis of this financial statement is the changes in assets and liabilities of the institution are not given (Collier & Allen, 1980; NACUBO, 1974). Thus, the application of the concept of sources and uses of funds based on balance sheet and income statement results is impossible under the conditions now prevailing in fund accounting reporting (see "reporting" section).

From the business point of view, increases in liabilities, depreciation, net profit, and decreases in assets are considered sources of funds; while decreases in liabilities, operating losses, payment of dividends, and increases in assets are considered uses of funds. Thus, the changes in all types of assets and liabilities as well as their effect on the financial position of a given organization between two reporting dates can be detected. At the same time, the effect of the financial operating results can be appreciated. This approach gives a more comprehensive perspective to the changes in the financial position of the organization (Brigham & Gapenski, 1983; Welsh & Antony, 1977; Weston & Brigham, 1977). The statement of sources and uses of funds now applied to higher education does not provide similar information regarding the flow of institutional resources; consequently, this statement is more appropriate for accountability purposes than for the financial explanation of the uses and sources of funds. NACUBO (1982a) recognizes that the purposes of higher financial reporting is the justification of the use of funds according to the purposes for which the revenues are provided to the institution, which constitutes the basis of fund accounting. NACUBO (1982a) holds that:

> In the commercial enterprise it can be stated as a generalization that the two principal sources of

> resources are the capital investment of the owners and the flow of revenues resulting from goods produced or services rendered. The profit objective serves as a regulator of management and permits a high degree of flexibility in the use of resources. The emphasis, then, in the accounting and reporting process is on the matching of expenses with revenues to determine net income (profit).
>
> Since service in which resources are consumed, is the objective of the college or university, the accounting and reporting process must address itself to accounting for resources received and used rather than to the determination of income (p.3).

This manner of reporting has been a bone of contention between the Financial Accounting Standard Board (FASB) and NACUBO. According to FASB (cited in Crilly, 1982), higher education institutions should report capital inflows and outflows. FASB (cited in NACUBO, 1982a) holds that the manner in which an organization obtains and spends cash or other liquid resources, its debt, and repayment of debt, and other factors that produce changes in the liquidity of the institution. Accordingly, these two opposite positions constitute an obstacle to the adaptation of the business point of view to the analysis of sources and uses of funds in higher education institutions. Phipps (1982) suggested the possibility of designing a statement of resource inflows and outflows divided into capital and operating items. The proposed statement would not be aimed at dividing capital and operating outflows. When a statement of expenses is required, it can be prepared as a schedule to the basic statement of sources and uses of funds. As for the whole reporting process Phipps stated:

> A Balance Sheet and a Statement of Changes in Fund Balances should complete the reporting process. At least for the present, the balance sheet would be prepared essentially with transaction information (often mislabeled "historical cost"). The Statement of Changes In Fund Balances would be prepared as now to reconcile each fund's beginning and ending balances, which are determined from balance sheet values.
>
> If implemented, these recommendations would not substantially change the financial statements of colleges and universities. A report on resource flows would be sufficiently different from the present Statement of Revenues, Expenditures and Other Changes to prevent confusion about what the statement purports to show, i.e., the flow of sources in and out of the organization (p. 194).

Minter and Bowen (1975, 1977, 1978, 1980) used the balance sheet items for the analysis of trends in assets, liabilities, and fund balances from 1969 to 1980 (which results were described earlier in this chapter). Such reports give a more comprehensive and understandable view of changes in the financial structure of higher education institutions than the present form of reporting change in fund balances. Table 14 serves as an illustration of the approach used by Minter and Bowen (1980) to analyze the trends in assets, liabilities, and fund balances. Appendix C illustrates the form of reporting actually used for the statement of changes in fund balances. Minter and Bowen employed index numbers to determine the changes in the financial structure of the institutions participating in the study. The index numbers facilitate the detection of changes in the financial structure of the institutions over a set period of years in relation to a base year (base year = 100).

The following example provides an illustration of the use of index numbers for trend analysis: assuming that the current assets of a given institution amounted to $30,000,000 in the base year 1970 (1970 = 100) and $45,000,000 in 1980; the difference of $15,000,000 means an increase of 50 percent. This increase is obtained by dividing the index of 1980 [($45,000,000/$30,000,000) x 100 = 150] by 100 (1970 = 100) (Halstead, 1983)[2]

Accordingly, for analysis purposes, the following criteria from business financial analysis may be adapted.[3]

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[2] The test and example are adapted from Halstead (1983).

[3] The text is adapted from Brigham and Gapenski (1983), Welsh and Anthony (1975), and Weston and Brigham (1974).

- Increases in assets and fund balances, decreases in liabilities, current fund expenditures, and deductions from other funds will indicate the uses of funds.
- Decreases in assets and fund balances and increases in liabilities, current fund revenues, and additions to other funds will indicate the sources of funds.

Comparison of Results to Other Institutions

The comparison of results derived from the financial analysis of one institution to other similar (in this case private) institutions permits the comparative assessment of weaknesses and strengths in the relative financial patterns (Dickmeyer & Hughes, 1982b; Minter, 1980; Minter et. al., 1982).

According to NACUBO (1980), and Hyatt and Thompson (1980) the general criteria for the selection of peer institutions are: similarity in size, (similar resource patterns), scope (similar programs), and reputation (similar student markets).

Nevertheless, comparison of an institution's statistics with those of peer institutions should not be assumed to indicate a good, bad, or fair condition. Thus, in the case of an institution that, for example, derives 90 percent of its current fund revenues from tuition, and a group of similar institutions averaging only 65 percent, it does not necessarily mean that the institution being compared is in a relatively weak financial condition. The comparison of results indicates that further exploration of the institution's dependence on tuition should be done to determine the factors causing the differences (Dickmeyer & Hughes, 1982a). In this respect, Minter et al. (1982) stated:

> The use of comparison is a recognized form of financial analysis, the purpose of which is to highlight differences and to raise essential questions about past and future policies for management and the Board. The interest should not be to create homogeneity, for that would succeed only in producing an average but inferior group of institutions. Cooperative information gives averages not ideals. Many institutions differ from comparative groups for good and valid reasons. The groups chosen may portray weaknesses or unnecessary strengths, neither of which is desirable to the institution. Comparisons do, however, help the analyst understand how an institution is different and encourage consensus on future policy and goals (p. 27).

PROBLEMS RELATING TO THE COMPARATIVE FINANCIAL ANALYSIS OF HIGHER EDUCATION INSTITUTIONS

Although most of the problems inherent to financial reporting and establishing financial measures already have been described here, it is worthwhile before the analysis, to summarize the issued involved. Essentially the credibility of this type of analysis relates to the reliability of the information and indicators to be applied, as well as the comparability of results among groups of institutions.

Reliability of the Data

The reliability of the financial information has been severely criticized because of the risks of overstatement or understatement and the mingling of restricted and unrestricted items in the financial statements. These risks are part and parcel of the criteria used for institutional fund accounting (NACUBO, 1982a; Collier & Allen, 1980) in classifying, recording, and reporting the financial information (Minter, 1980; Minter & Conger, 1979a, 1979b; Wilkinson, 1979) and include institutional internal policies applied to the management of restricted and unrestricted funds (Wilkinson, 1979). The suggested approach to overcome this problem is to aggregate restricted and unrestricted funds (Minter, 1980). The principles and practices underlying fund accounting permits the possibility of combining restricted and unrestricted assets and liabilities for reporting purposes (NACUBO, 1982a; Collier & Allen, 1980). Furthermore, the fact that most assets are carried on the books at their original acquisition value does not permit a fair comparison of such assets with the trends in enrollment, revenues, expenditures, and inflation (Minter & Bowen 1980). Then, too, the reporting of investments in plant at cost or fair market value may cause under- or over-assessment in relation to their current market price (Minter et al., 1982).

As for the use of indicators, financial ratio analysis is seriously affected by the problems of data reliability (Minter, 1980; Minter et al., 1982; Wilkinson, 1979). Accordingly, when ratios are calculated using unreliable information and are applied to restricted or unrestricted items or other data, additional or supplementary measurement may be required to ensure or reinforce the credibility of the information.

On the other hand, a single ratio must be compared to a given point of reference. The indicator can be compared with trends in the same ratio over a given period, or with the corresponding ratio in similar institutions. This approach provides a more useful and wider perspective of relative financial condition (Minter et al., 1982).

The standard financial ratio analysis also does not permit the evaluation of nonfinancial resources. And items such as academic programs, student services, physical facilities, and faculty are left out. Hence, the calculation of some nonfinancial data (such as instruction proportions and measures related to enrollment trends) help to reinforce such analyses (Dickmeyer & Hughes, 1982b; Minter et al., 1982).

Finally, as noted above, the institutions analyzed must be similar in scope, size, and reputation (Hyatt and Thompson, 1980; NACUBO, 1980). This is especially important when using a prescribed set of indicators to analyze trends within and among groups of institutions. For example, a decline in enrollment can be responded to by a group of institutions better than an individual institution because the components of the group will have a larger framework of resources with which to react successfully to such declines (Dickmeyer, 1983).

SUMMARY

The methodological procedures employed and described in the next chapter are derived from the review of the literature, which detailed the major criteria underlying the financial analysis of higher education institutions in general and private higher education in particular. Accordingly, factors related to reliability and validity of the data, indicators, and trend measures, and the applicability of financial and nonfinancial measurement instruments have been considered, which expand, adjust, and refine the methodology overview given in Chapter I.

The literature review has:

1. Established a perspective on the trends in the financing of higher education institutions at the national level;

2. Surveyed financial and nonfinancial measures according to the research questions formulated in Chapter I to ensure the validity of the measures employed so as to

obtain results that provide useful answers to these research questions;

3. Excluded unreliable financial indicators, and included more reliable ones;

4. Explained limitations to the study and expanded and refined the definition of terms; and

5. Established patterns and a basis for the analysis and interpretation of the results and formulation of useful conclusions and recommendations.

CHAPTER III

METHODOLOGICAL PROCEDURES

Overview

The methodology employed to conduct this study is consistent with the research plan delineated in Chapter I. The design of the study was initially planned in the summer of 1983. The research design required preliminary onsite visits to the selected institutions to verify the availability and condition of financial and nonfinancial data corresponding to the fiscal and academic years 1973-74 to 1982-83. The procurement and analysis of data was not primarily dependent on the interviews conducted with university business and academic officers of the institutions. The financial and nonfinancial information was in the public domain and therefore readily available. A high degree of cooperation was given by institutions and their respective offices in providing and discussing the requisite financial information.

The research questions, financial and nonfinancial indicators and methodological procedures were adapted from: NACUBO's *Financial Self-Assessment: A Workbook for Colleges* (Dickmeyer & Hughes, 1982b); *Using Ratio Analysis to Evaluate Financial Performance* (Minter et al., 1982); and *Ratio Analysis in Higher Education* (Minter, 1980). The Index Number Time series was adapted from: *Inflation Measures for Schools and Colleges* (Halstead, 1983) and *Financial and*

Educational Trends in the Private (Independent) Sector of American Higher Education (Minter & Bowen, 1975, 1977, 1978, 1980). The use of percentages to determine the relative distribution of and trends in revenues and expenditures including assets, liabilities, and fund balances was adapted from Minter and Bowen's annual surveys mentioned above. Data classification approach used to compare balance sheets, statement of revenues, expenditures and other charges of the institutions were also adapted from Minter and Bowen. The items classified as educational and general revenues and educational and general expenditures were included in these broad categories according to the NACUBO's pattern for such classification (NACUBO, 1982a)[1]

The model of sources and uses of funds was adapted from standard business procedures to provide a more comprehensive view of the cause of changes in institutional fund balances.

Population

The population of the study included the institutions selected in the original research plan (see Chapter I, p. 20), i.e., the American University, The Catholic University of America, Georgetown University, and The George Washington University. All of these institutions are members of the Consortium of Universities of the Washington,

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[1] See Review of the Literature, Chapter II, pp. 88-105.

D.C. Metropolitan Area. The financial structures of these institutions were analyzed from both the aggregate and individual points of view. Thus, the risks involved in making judgments on the basis of aggregate figures were minimized. Consequently, differences in institutional financial patterns among the institutions were determined by clarifying financial elements related and unrelated to the particular condition of a given institution.

Data Collection

The financial data were obtained from the audited financial statements of the American University,[2] The Catholic University of America,[3] Georgetown University,[4] and The George Washington University[5] for the fiscal years 1973-74 to 1982-83. The audited financial statements of The American University were obtained from the financial reports of the institution available from the Archives of The American University. The audited financial statements of The Catholic University of America were obtained from the Office of the Vice President and Treasurer of this institution. The audited financial statements of Georgetown University and The George Washington University were obtained from the respective Special Collection sections of these institutions.

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[2] The American University, Financial Report, Fiscal Years 1973-74 to 1982-83.

[3] The Catholic University, Financial Report, Fiscal Years 1973-74 to 1982-83.

[4] Georgetown University, Financial Report, Fiscal Years 1973-74 to 1982-83.

[5] The George Washington University, Financial Report, Fiscal Years 1973-74 to 1982-83.

The information related to full-time equivalent student enrollment and faculty of each university was obtained respectively from The American University, Office of Institutional Planning and Research; The Catholic University of America, Office of Institutional Research; Georgetown University, Office of Institutional Research; and The George Washington University Provost Office, Office of Institutional Research.

Data Classification

Given that the purposes of the study were essentially related to trend analysis, the data were organized in time series by fiscal year and by institution. The aggregate statistics for the institutions surveyed were classified following the same pattern as for the individual institutions. This procedure permitted calculation of financial and nonfinancial indicators used for the description, analysis, and evaluation of both the aggregate and individual institutions.

The balance sheet components were classified in the four broad categories of funds shown in the balance sheets of the institutions: current, endowment, pland, and loan funds. The combined balance sheets of the institutions were elaborated through the aggregation of corresponding assets, liabilities, and fund balances of the four institutions studied here (see Tables 21, 23, 25, 27, 29). The same criteria were applied to the components of the statement of current fund revenues, expenditures, and other changes, as well as to the determination of the sources and uses of funds (flow of funds). The additions to and deductions from noncurrent funds are expressed as a net concept (additions minus deductions). This procedure permitted the segregation of statistics not directly related to the current fund revenues and current fund expenditures of the institutions. Mandatory and non-mandatory transfers were not considered in the analyses of sources and uses of funds because they do not directly affect the inflow or outflow of resources.

To avoid the problems caused by the classification of restricted and unrestricted items, such funds were aggregated without considering the restrictions on the funds. Moreover, this procedure permitted a more comprehensive picture of the availability of financial resources in all the institutional fund groups (the restrictions affect the institutional purposes but not the availability of resources). Thus, in determining the liquidity of the institutions, all liquid assets existing in all funds (i.e., cash, temporary investments, and accounts receivable (see Table 37-41), as well as all the current liabilities existing in all the funds were considered (current liabilities in noncurrent funds were virtually non-existent). A separate time series was prepared for interfund borrowing operations (see Table 31). Because these transactions do not directly affect the institutions inflow and outflow of resources, they were not considered in the comparative balance sheets and sources and uses of funds.

Analytical Tools

The analytical tools employed for the purposes of this study were applied as required by the research questions formulated in Chapter I. These analytical tools will now be discussed.

1. The analysis of the revenue structure was done through the determination of percentage of distribution during the 10-year period corresponding to the fiscal years 1973-74 to 1982-83, and the same procedure was applied to the analysis of the expenditure structure. This procedure permitted the determination of the composition of the total revenue and expenditure and the trends in the contribution of the various components to the revenue and expenditure structures (see Tables 16-20).

The balance sheet structure analysis and evolution of such a structure required the use of percentages of distribution of the diverse components as well as the use of indicators of change in relation to the base year (index numbers 1973-74 = 100). Comparative sources and uses of funds statements were elaborated for each institution as well as the aggregate of all institutions; consequently, the composition of the balance sheet structure could be determined for the proportion of the components of assets, liabilities and funds balances as well as the trends in the relative stability of the proportions of various components. The relative changes in assets, liabilities, and fund balances were measured through use of index numbers (1973-74 = 100). (See Tables 22, 24, 26, 28, 30). These changes were then supplemented by the determination of the sources and uses of funds for the individual and combined institutions on a consistent basis.

2. The evaluation of financial conditions required the employment of the following procedures:

a. In the determination of financial health some trends in the following financial ratios were calculated (see Tables 32-36):

Current ratio: Current assets divided by current liabilities.

Liquidity ratio:[6] Liquid assets of all funds (cash, temporary investments and accounts receivable) divided by current liabilities in the current fund).

Capital fund balance ratio: Capital fund balance (endowment and loan and annuity and life income funds and agency funds) divided by current fund expenditures and mandatory transfers.

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[6] Liquid assets, plant debt, and net investment in plant are shown in Tables 37-41.

Long-term (plant) debt to revenue ratio:[6] Long-term (plant) debt divided by total current fund revenues.

Equity ratio: Total assets divided by total liabilities.

Accordingly, declines or improvements in financial health are determined by trends in the ratios listed above.

b. The effect of external factors on the financial conditions of the institutions was determined by analysis of the trends in enrollments and inflation. The trends in enrollment were measured in terms of full-time equivalent (FTE) students (see Table 42). The sensitivity of enrollment to changes in tuition prices (see Table 45) was determined by dividing the yearly percentage of change in enrollment by the percentage of change in tuition and fees per student (total of tuition and fees divided by the numbers of FTE students).

Changes in enrollment in relation to the base year (1976-77 = 100) (the information on FTE enrollment was available since this academic year in two of the institutions surveyed) were determined through the use of index numbers, i.e., FTE students in the present year divided by FTE students in the base year and multiplied by 100 (see Table 43). Thus, increases, declines, or stability of enrollments could be determined.

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[6] Liquid assets, plant debt, and net investment in plant are shown in Tables 37-41.

Trends in inflation were determined through the changes in educational and general expenditures and educational and general expenditures per student in current and constant dollars (1973-74 = 100) (see Tables 49-52).

The indices of internal inflation of the institutions (1973-74 = 100) were obtained by dividing the amounts of educational and general expenditures in each year by the amount of the educational expenditures in fiscal year 1973-74 (see Table 52). A similar procedure was applied to educational and general revenues (see Table 52), total tuition and fees (see Table 46) and tuition and fees per student (see Table 47), including expenditures per student (see Tables 49 and 50). The expenditures and tuition and fees per student in current dollars were analyzed for the time period 1976-77 to 1982-83 for the same reasons stated for the trends in FTE enrollments (FTE enrollments available since 1976-77).

In terms of constant dollars, these concepts were analyzed for the time periods 1976-77 to 1981-82 since the measures were available at the national level during this time frame (see Table 51). Measures included Consumer Price Index, Higher Education Price Index, Gross National Product Implicit Price Deflator, Private Higher Education Tuition Price Index, and Family

Median Income Index (See Table 51). The number of years covered by this analysis was considered sufficient for eliciting reasonable conclusions. The inflation indicators at the national level at 1967 prices were adjusted to the base year 1974 (Fiscal Year 1973-74 = 100) for a more reasonable comparison during the time period covered by the study; thus, for the purposes of this study, concepts in constant dollars are expressed in 1974 dollars. The HEPI (1974 = 100) was the deflator used for this purpose.

c. The effect of the administrative policies was assessed through the revenue allocation ratio for instruction (see Tables 32-36) (instruction expenditures divided by total educational and general revenues). To determine the trends in expenditure allocation patterns as related to the trends in revenues, factors such as trends in expenditures per student and FTE students to FTE faculty were also considered in the evaluation. Thus, a wider perspective on the use of resources for instructional activities is gained. Other key expenditures considered were those related to research, public service, institutional support, and operation and maintenance of the physical plant (allocation of revenues to educational and general expenditures); thus, the effort to control these types of expenditures could be assessed through their corresponding revenue allocation ratios (see Tables 32-36). The efforts undertaken to build a capital base (allocation of funds to capital resources) were measured by the capital fund balance ratio (endowment plus loan fund balance divided by the total current fund expenditures and mandatory transfers) (see Tables 32-36). The long-term (plant) debt to revenue ratio (long-term plant debt divided by current funds revenues) (see Tables 32-36) was employed to measure the management ability to minimize exposure to risk; e.g., the reduction of the proportion of institutional revenues committed to the repayment of indebtedness will indicate an increase in resource management flexibility/control.

The analysis of sources and uses of funds for the 10-year period 1973-74 to 1982-83 provideed a perspective on the trends in resource inflows and outflows with the consequent effect on institutional fund balances (see Tables 21, 23, 25, 27, 29); thus, for example, short-term financing policies and allocation of funds to investment (plant, endowment and loan funds) could be identified.

The trends in assets and liabilities are measured in terms of index numbers. This procedure permits the determination of changes in assets and liabilities. Thus, the relationship indicated by the balance sheet ratios can be explained by means of these trends. For example, a decrease in the current ratios may be explained by a faster increase in current liabilities over current assets, which would indicate an increase of short-term financial pressure (see Tables 22, 24, 26, 28, 30).

d. The change in an institution's financial risk position was measured by an analysis of the ability to gain financial flexibility in the management of the resources. Thus, a decline in flexibility would mean an increase in the risk position of a given institution or institutional aggregate. Consequently, the following financial indicators were used: percentage of distribution of revenue sources to determine the trends in the composition of the revenue structure (see Tables 16-20); the long-term (plant) plant debt to revenue ratio to measure the effect of long-term debt on the availability of revenues; the capital fund balance ratios to determine the trends in capital fund investment (endowment and loan funds) according to the growth in the institutional operating size.

e. The changes in nonfinancial resources that may have caused variations in the institutions' financial resources were measured by the trends in allocation of revenue to instructional expenditures (revenue allocation ratio for instruction) (see Tables 32-36) in order to measure the financial emphasis on the primary mission of the institution of educating students.

The determination of expenditures per student in constant dollars (educational and general expenditures plus mandatory transfers divided by FTE students) will reflect the relationship between expenditures and enrollment without the inflation effect; thus the effect of enrollment trends on institutional resource outflows were determined (see Table 50). This calculation was possible for the time period 1976-77 to 1981-82 because the FTE enrollment data were available for two of the institutions since 1976-77 (see Table 42), and the national inflation measures were available until 1981-82 (see Table 51). The HEPI (1972 = 100) was the deflator used for these purposes.

To strengthen this analysis, the ratio of FTE students to FTE faculty (see Tables 42, 49, 50, 53) was employed. This procedure permitted the determination of changes in class size as a consequence of the trends in enrollment and faculty with the relative effect on the variations in expenditures per student. For example, a reduction in faculty numbers may be associated with a reduction in expenditures per student, and with an increase in class size.

f. The overall financial condition of the institutions was assessed by a review of the key measures previously considered for the combined and individual institutions. Thus, the key financial characteristics of the aggregate and each institution are summarized according to the trends in the selected indicators for the determination of financial conditions.

3. The evaluation of financial performance permitted the determination of factors underlying the financial condition. These factors were:

a. The contribution of the varied sources of institutional revenues as measured by the contribution ratios (each source of revenue divided by total educational and general expenditures plus mandatory transfers). This procedure permitted the determination of the contributions provided by tuition and fees, Federal government, private philanthropy, endowment income, and sales and services of educational activities to the financing of the institutional educational and general expenditures and trends in such a contribution.

b. The major administrative policies for resource allocation to expenditures according to the trends in revenues were evaluated through the allocation or demand ratios. Thus, the proportion of revenues required to accomplish an educational activity were determined thereby. For these purposes, the ratios for revenue allocation for instruction, revenue allocation for operation and maintenance of plant, and for institutional support were employed (see Tables 32-36).

In order to obtain a more ample perspective of the allocation of revenues to expenditures for instruction, the FTE student to faculty ratio was also considered to determine the budget implications of increased or decreased class size in relation to changes in faculty members as related to enrollment levels; for the same reason, expenditures per student were also considered. These procedures permitted a better explanation of the trends in the relationship between expenditures for instruction and revenues as associated with changes in class size.

c. The determination of the balance between revenues and expenditures permitted the evaluation of the ability of the institution to live within their means. Thus, the evaluation of financial performance at this level required the employment of the following indicators:

- Net educational general revenues (educational and general revenues minus educational and general expenditures and mandatory transfers) to total educational and general revenues.

This procedure permitted the determination of the sufficiency of the educational and general revenues to cover the education and general expenditures (see Tables 32-36).

- Net total revenues (total current fund revenues minus current fund expenditures and mandatory transfers) to total current fund revenues. This procedure permitted the determination of the sufficiency of the total current fund revenues to cover the total current fund expenditures (see Tables 32-36).
- Net auxiliary enterprises revenues (auxiliary enterprise revenues minus auxiliary enterprise expenditures and related mandatory transfers) to total auxiliary enterprise revenues. This procedure permitted the determination of the self-financing capability of the auxiliary enterprise (see Tables 32-36).
- Net hospital revenues (hospital derived revenues minus hospital expenditures and related mandatory transfers) to total hospital derived revenues. This procedure permitted the determination of self-financing capabilities of hospitals (see Tables 32-36).

d. The overall financial performance of the institutions summarized the individual and combined ability of the institutions for the management of these current fund operations (revenues and expenditures) at the total operational, educational and general, and self-financing activities level.

4. Evaluation of creditworthiness. The determination of the ability of institutions to repay indebtedness and increase or maintain their borrowing power required the use of the following statistics:

The Equity Ratio: This ratio measures the degree to which the institutions hold equity on their assets and also indicates the debt of the institution and the condition of the institution to increase indebtedness (see Tables 32-36). Consequently, the lower the value of this ratio, the lower the degree of equity.

The Plant Equity Ratio:[7] (Net investment in plant to plant debt): This ratio will indicate increases or declines in the borrowing power of the institutions.

The higher the value of this ratio the higher the degree of creditworthiness.

The Long-term (Plant) Debt to Revenue Ratio: This ratio easures the commitment of revenues to the repayment of indebtedness. Thus, a growing debt service to revenue ratio reduces the borrowing power of an institution because of a decline in the flexibility for resource management.

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[7] Investment in plant, plant debt, and net investment in plant are shown in Tables 37-41.

Trends in enrollment: Constitutes the most powerful indicator of the ability of the institutions to generate revenues. These trends were measured by comparing the changes in FTE enrollment in each year to the FTE enrollment size in a given base year (see Tables 32-36). (In this case 1976-77 = 100 because the data were available for this academic year.) Thus, an institution with stable FTE enrollment will show more ability to generate resources to pay indebtedness than an institution showing declining enrollments.

5. The trends in the financing of the institutions were determined during the course of the study by considering trends in the total financial structure, financial condition, financial performance and creditworthiness. Trends in revenue and expenditures were compared to the internal inflation of the institutions and the inflationary trend at the national level. The external inflation measures used for the purposes of this study were: the prices of the national economy as measured by the Consumer Price Index (CPI), the price of goods and services related to higher education as measured by the Higher Education Price Index (HEPI), the Gross National Product as measured by the Gross National Product Implicit Price Deflator (GNPIPD), higher educational tuition prices as measured by the Higher Tuition Price Index, and family income as measured by the Family Median Income Index (see Table 51).

CHAPTER IV

FINDINGS

Overview

The results of this study were obtained in accordance with the research questions formulated in Chapter I. Consequently, such results are presented and analyzed in the following order:

1. Elements comprising the financial structure of the selected private universities in the Consortium of Universities of the Washington Metropolitan Area, with a delineation of how these elements contributed to that financial structure between 1982 and 1983 in terms of:
    a. Composition of their revenue sources.
    b. Composition of their current expenditures.
    c. Balance sheet structure and evaluation.
2. Financial condition of the institutions between 1973 and 1983. This analysis includes:
    a. Determination of financial health.
    b. Effect of major external factors on the financial condition of the institutions in relation to enrollments and inflation.
    c. Effect of major administrative policies on the financial condition of the institutions.
    d. Changes in the financial risk position of the institutions.

e. Changes in nonfinancial resources that may have caused variations in the institutions' financial resources.

f. Overall financial condition of the institutions.

3. Financial performance of the institutions. This analysis includes:

a. Financial performance according to the contribution and demand (allocation) ratios.

b. Overall financial performance of the institutions.

4. Evaluation of creditworthiness of the institutions between 1973 and 1983 is analyzed in relation to the equity ratio, the plant equity ratio, the debt service to revenue ratio, and change in enrollments.

5. Trends in the financing of the institutions between 1973 and 1983. The analysis focuses on the relationship between institutional revenues and the valid sources of revenues; student cost and student enrollments (in terms of FTE students); assets, liabilities, current fund balance; surplus or deficit; institutional expenditures (educational and general expenditures and mandatory transfers); Consumer Price Index (CPI); Higher Education Price Index (HEPI); the Gross National Product (GNP); faculty salaries; and family median income.

Elements forming the financial structure of the institutions.

The following analysis is a delineation of the ways each element forming the financial structure of the institutions under study serve to support that structure.

a. Composition of revenue sources.

As a group the institutions show a combined revenue structure composed of the traditional sources of revenue to private higher education institutions: tuition and fees; grants and contracts from the Federal government; gifts, grants, and contracts from private philanthropy; endowment and similar investment income; sales and services of educational activities; sales and services of auxiliary enterprises; sales and services of hospitals, and other (unclassified) sources of revenues (see Table 16). Revenues derived from state and local governments as well as from the Federal government appropriations are not part of the revenue structure of the group of institutions examined during the 10-year period between 1973-74 and 1982-83. Table 16 shows the amounts and appropriations in which these elements contribute to that revenue structure between 1973-74 and 1982-83. Accordingly, the revenue structure cannot be considered stable due to the change in proportions detected through the data shown in Table 16. The educational and general revenues as a whole experienced a steady decline in their proportion. This can be attributed to the fluctuating decline in government support, the steady decline in private

Table 16

The American University, The Catholic University of America, Georgetown University and The George Washington University; Combined: Comparative Statement of Revenue, Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years, 1973-74 -- 1982-83 (in $000)

	1973-74		1974-75		1975-76	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	234,373	100.0	271,306	100.0	309,028	100.0
Educational and general revenues:						
Tuition and fees	89,787	38.3	98.786	36.4	112,391	36.4
Federal government	17,939	7.7	26,079	9.6	27,590	8.9
Private gifts, grants, and contracts	34,875	14.9	38,911	14.3	39,936	12.9
Endowment and similar income	5,110	2.2	5,107	2.0	4,813	1.6
Sales and services of educational activities	2,870	1.2	3,375	1.2	7,482	2.4
Total educational and general (E&G) revenues	150,581	64.3	172,258	63.5	192,212	62.2
Auxiliary enterprises	19,002	8.1	22,769	8.4	24,355	7.9
Hospitals	57,236	24.4	72,237	26.6	87,167	28.2
Other	7,554	3.2	4,042	1.5	5,294	1.7
Current fund expenditures	228,631	100.0	260,051	100.0	296,483	100.0
Educational and general expenditures:						
Instruction	72,745	31.8	80,453	30.9	92,199	31.1
Research	24,565	10.7	26,084	10.0	29,918	10.0
Public service	592	0.3	543	0.2	588	0.2
Academic Support	9,292	4.1	8,266	3.2	9,415	3.2
Institutional Support	20,362	9.0	24,673	9.5	28,744	9.7
Student services	6,727	2.9	8,749	3.4	8,943	3.0
Operation and maintenance of plant	17,666	7.7	20,108	7.7	21,912	7.4
Scholarships and fellowships	8,734	3.8	10,082	3.9	11,766	4.0
Total Educational and general (E&G) expenditures	160,683	70.3	178,958	68.8	203,515	68.6
Mandatory Transfers	3,654	--	5,447	--	3,401	--
Educational and general (E&G) expenditures and mandatory transfers	164,337	--	184,677	--	206,916	--
Auxiliary enterprises	18,084	7.9	20,402	7.8	21,623	7.3
Hospitals	49,864	21.8	60,691	23.[illegible]	71,345	24.1
Total current funds expenditures and mandatory transfers	232,285	--	265,498	--	299,884	--

Source: Audited statements of current fund revenues, expenditures and other changes of The American University, The Catholic University of America, Georgetown University, and the George Washington University, Fiscal Years 1973-74 to 1982-83.

Table 16 (continued)

The American University, The Catholic University of America, Georgetown University and The George Washington University; Combined: Comparative Statement of Revenue, Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years, 1973-74 -- 1982-83 (in $000)

	1976-77		1977-78		1978-79	
	Amount	% of Distri-bution	Amount	% of Distri-bution	Amount	% of Distri-bution
Current fund revenues	345,443	100.0	382,572	100.0	415,495	100.0
Educational and general revenues:						
Tuition and fees	120,378	34.8	136,038	35.6	153,211	36.9
Federal government	28,217	8.2	26,954	7.0	26,444	6.4
Private gifts, grants, and contracts	45,917	13.2	47,881	12.5	45,934	11.0
Endowment and similar income	5,720	1.7	6,860	1.8	8,349	2.0
Sales and services of educational activities	9,255	2.7	10,322	2.7	11,463	2.8
Total educational and general (E&G) revenues	209,487	60.6	228,055	59.6	245,401	59.1
Auxiliary enterprises	27,666	8.0	30,039	7.9	33,471	8.0
Hospitals	102,543	29.7	116,821	30.5	128,319	30.9
Other	5,747	1.7	7,657	2.0	8,304	2.0
Current fund expenditures	337,552	100.0	365,822	100.0	396,456	100.0
Educational and general expenditures:						
Instruction	102,536	30.4	101,628	27.8	105,681	26.7
Research	32,901	9.7	35,534	9.7	37,204	9.4
Public service	776	0.2	746	0.2	763	0.2
Academic Support	11,018	3.3	16,549	4.5	18,524	4.7
Institutional Support	32,720	9.7	36,796	10.1	41,566	10.5
Student services	10,597	3.1	11,887	3.2	12,586	3.1
Operation and maintenance of plant	24,226	7.2	26,241	7.2	27,365	6.9
Scholarships and fellowships	13,331	4.0	15,363	4.2	17,172	4.3
Total Educational and general (E&G) expenditures	228,105	67.6	244,744	66.9	260,861	65.8
Mandatory Transfers	3,437	--	4,678	--	6,832	--
Educational and general (E&G) expenditures and mandatory transfers	231,542	--	249,422	--	267,693	--
Auxiliary enterprises	24,087	7.1	25,650	7.0	29,593	7.5
Hospitals	85,360	25.3	95,428	26.1	106,002	26.7
Total current funds expenditures and mandatory transfers	340,989	--	370,500	--	403,288	--

Source: Audited statements of current fund revenues, expenditures and other changes of The American University, The Catholic University of America, Georgetown University, and the George Washington University, Fiscal Years 1973-74 to 1982-83.

Table 16 (continued)

The American University, The Catholic University of America, Georgetown University and The George Washington University; Combined: Comparative Statement of Revenue and Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years, 1973-74 -- 1982-83 (in $000)

	1979-80		1980-81		1981-82		1982-83	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	476,825	100.0	555,601	100.0	628,784	100.0	690,711	100.0
Educational and general revenues:								
Tuition and fees	175,332	36.8	199,879	36.0	223,416	35.5	248,059	35.9
Federal government	34,190	7.2	35,465	6.4	35,135	5.6	31,856	4.6
Private gifts, grants, and contracts	49,916	10.5	54,706	9.8	59,853	9.5	59,377	8.6
Endowment and similar income	11,092	2.3	12,473	2.2	15,260	2.4	16,403	2.4
Sales and services of educational activities	13,948	2.9	19,704	3.6	25,423	4.1	35,578	5.2
Total educational and general (E&G) revenues	284,478	59.7	322,227	58.0	359,087	57.1	391,273	56.7
Auxiliary enterprises	38,152	8.0	43,778	7.9	48,353	7.7	51,762	7.5
Hospitals	147,810	31.0	181,568	32.7	210,398	33.5	235,185	34.0
Other	6,385	1.3	8,028	1.4	10,946	1.7	12,491	1.8
Current fund expenditures	454,568	100.0	532,747	100.0	598,678	100.0	650,682	100.0
Educational and general expenditures:								
Instruction	123,400	27.0	138,887	26.0	151,724	25.3	161,269	24.8
Research	39,526	8.7	42,779	8.0	44,989	7.5	45,897	7.1
Public service	896	0.2	1,254	0.2	1,555	0.3	1,271	0.2
Academic Support	21,159	4.7	24,476	4.6	27,439	4.6	28,826	4.4
Institutional Support	53,412	11.8	64,795	12.3	77,484	12.9	93,036	14.3
Student services	14,452	3.2	16,363	3.0	18,011	3.0	19,974	3.1
Operation and maintenance of plant	44,132	9.7	51,981	9.8	54,464	9.1	59,518	9.1
Scholarships and fellowships	21,202	4.7	25,427	4.8	28,687	4.8	29,782	4.6
Total Educational and general (E&G) expenditures	318,179	70.0	365,962	68.7	404,353	67.5	439,573	67.6
Mandatory Transfers	5,402	--	4,999	--	6,889	--	5,894	--
Educational and general (E&G) expenditures and mandatory transfers	323,581	--	370,961	--	411,242	--	445,467	--
Auxiliary enterprises	30,734	6.8	34,609	6.5	38,611	6.4	39,947	6.1
Hospitals	105,655	23.2	132,176	24.8	155,714	26.1	171,162	26.3
Total current funds expenditures and mandatory transfers	459,970	--	537,746	--	605,567	--	656,576	--

Source: Audited statements of current fund revenues, expenditures and other changes of The American University, The Catholic University of America, Georgetown University, and the George Washington University, Fiscal Years 1973-74 to 1982-83.

philanthropy, and the relative stability in the proportions of tuition and fees, and endowment income. Although sales and services of educational activities have experienced a steady increase, this fact has not compensated for the decline in the educational and general revenues. Revenues derived from auxiliary enterprises have remained relatively stable during the 10-year period, showing a slightly fluctuating and declining trend. Hospital derived revenues have experienced a substantial and steady increase in the proportion of contribution to the total combined current fund revenues.

The revenue structure of the individual institutions is shown in their respective comparative statement of revenues, expenditures and other changes presented in Tables 17 to 20. As observed in these tables, there are some differences among the institutions regarding the elements forming the revenue sources. The American University (see Table 17) and The Catholic University of America (see Table 18) do not show revenues derived from hospital activities, while Georgetown University (see Table 19) and The George Washington University (see Table 20) exhibit this source of revenue in their respective operating statements. With the exception of The George Washington University, the institutions individually reflect the contribution of the Federal government through grants and contracts, as well as revenues derived from sales and services of educational activities.

Table 17

The American University, Comparative Statement of Current Fund Expenditures, and Other Changes, Percentage of Distribution for Fiscal Years; 1973-74 -- 1982-83 (in $000)

Current fund revenues, expenditures and mandatory transfers	1973-74		1974-75		1975-76	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	31,344	100.0	34,759	100.0	37,858	100.0
Educational and general revenues:						
Tuition and fees	21,645	69.1	24,742	71.2	26,998	71.3
Federal government	--	--	4,203	12.0	4,242	11.2
Private gifts, grants, and contracts	2,063	6.6	925	2.7	1,101	2.9
Endowment and similar income	693	2.2	752	2.2	626	1.7
Sales and services of educational activities	35	1.1	151	0.4	135	0.3
Total educational and general (E&G) revenues	24,436	78.0	30,773	88.5	33,102	87.4
Auxiliary enterprises	3,376	10.8	3,806	10.9	4,317	11.4
Hospitals	--	--	--	--	--	--
Other	3,352	11.2	180	0.5	439	1.2
Current fund expenditures	30,979	100.0	33,018	100.0	36,508	100.0
Educational and general expenditures:						
Instruction	14,217	45.9	12,413	37.6	14,305	39.2
Research	1,814	5.9	2,135	6.5	1,920	5.3
Public service	271	0.9	215	0.7	282	0.8
Institutional support	2,232	7.2	4,951	15.0	4,714	12.8
Academic support	3,730	12.0	2,664	8.0	3,193	8.7
Student services	844	2.7	2,008	6.1	2,344	6.4
Operation and maintenance of plant	2,674	8.6	2,583	7.8	3,199	8.8
Scholarships and fellowships	2,187	7.0	2,888	8.7	3,123	8.6
Total Educational and general (E&G) expenditures	27,969	90.2	29,857	90.4	33,080	90.6
Mandatory transfers	781	--	767	--	934	--
Educational and general (E&G) expenditures and mandatory transfers	28,750	--	30,624	--	34,014	--
Auxiliary enterprises	3,010	9.8	3,161	9.6	3,428	9.4
Total current funds expenditures and mandatory transfers	31,760	--	33,785	--	37,422	--

Source: Audited statements of current fund revenues, expenditures and other changes of The American University, Fiscal Years 1973-74 to 1982-83.

Table 17 (continued)

The American University, Comparative Statement of Current Fund Expenditures, and Other Changes, Percentage of Distribution for Fiscal Years; 1973-74 -- 1982-83 (in $000)

Current fund revenues, expenditures and mandatory transfers	1976-77		1977-79		1978-79	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	39,008	100.0	41,767	100.0	47,825	100.0
Educational and general revenues:						
Tuition and fees	27,720	71.1	29,439	70.5	32,864	68.7
Federal government	3,947	10.1	4,462	10.7	5,471	11.4
Private gifts, grants, and contracts	1,438	3.7	1,657	4.0	1,890	4.0
Endowment and similar income	663	1.7	722	1.7	1,098	2.3
Sales and services of educational activities	52	0.1	47	0.1	55	0.1
Total educational and general (E&G) revenues	33,820	86.7	36,327	87.0	41,378	86.5
Auxiliary enterprises	4,636	11.9	5,098	12.2	5,906	12.3
Hospitals	--	--	--	--	--	--
Other	552	1.4	342	0.8	541	1.2
Current fund expenditures	38,682	100.0	40,667	100.0	45,697	100.0
Educational and general expenditures:						
Instruction	14,402	37.2	15,001	36.9	16,727	36.6
Research	1,756	4.5	2,318	5.7	2,605	5.7
Public service	381	1.0	384	0.9	397	0.9
Institutional support	5,329	13.9	5,524	13.6	6,448	14.1
Academic support	3,807	9.8	4,012	9.9	4,481	9.8
Student services	2,501	6.5	2,493	6.0	2,797	6.1
Operation and maintenance of plant	3,495	9.0	3,595	8.9	3,692	8.1
Scholarships and fellowships	3,240	8.4	3,445	8.5	3,979	8.7
Total Educational and general (E&G) expenditures	34,911	90.3	36,772	90.4	41,126	90.0
Mandatory transfers	782	--	777	--	723	
Educational and general (E&G) expenditures and mandatory transfers	35,693	--	37,549	--	41,849	--
Auxiliary enterprises	3,771	9.7	3,895	10.6	4,571	10.0
Total current funds expenditures and mandatory transfers	39,464	--	41,444	--	46,420	--

Source: Audited statements of current fund revenues, expenditures and other changes of The American University, Fiscal Years 1973-74 to 1982-83.

Table 17 (Continued)

The American University, Comparative Statement of Current Fund Expenditures, and Other Changes, Percentage of Distribution for Fiscal Years, 1973-74 -- 1982-83 (in $000)

Current fund revenues, expenditures and mandatory transfers	1979-80		1980-81		1981-82		1982-83	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	55,387	100.0	63,498	100.0	68,553	100.0	67,613	100.0
Educational and general revenues:								
Tuition and fees	36,496	65.9	44,061	69.4	46,777	67.8	48,234	71.3
Federal government	6,235	11.3	5,642	8.9	6,765	10.0	4,841	7.2
Private gifts, grants, and contracts	3,171	5.7	3,437	5.4	4,190	6.1	3,437	5.1
Endowment and similar income	1,689	3.0	1,512	2.4	1,400	2.0	1,365	2.0
Sales and services of educational activities	107	0.2	68	0.1	30	--	14	--
Total educational and general (E&G) revenues	47,698	86.1	54,720	86.2	58,862	85.9	57,891	85.6
Auxiliary enterprises	6,883	12.4	8,232	12.9	8,739	12.7	8,815	13.1
Hospitals	--	--	--	--	--	--	--	--
Other	806	1.5	546	0.9	952	1.4	907	1.3
Current fund expenditures	53.126	100.0	63,648	100.0	69,581	100.0	63,988	100.0
Educational and general expenditures:								
Instruction	18,991	35.7	22,897	36.0	24,995	35.9	23,909	37.4
Research	3,082	5.8	3,861	6.0	4,615	6.6	3,244	5.1
Public service	597	1.2	931	1.5	968	1.5	733	1.1
Institutional support	7,520	14.1	9,360	14.7	9,717	13.9	9,192	14.4
Academic support	5,247	9.9	6,557	10.3	7,272	10.5	6,011	9.4
Student services	3,126	5.9	3,492	5.5	3,508	5.0	3,122	4.9
Operation and maintenance of plant	4,543	8.6	5,062	8.0	4,989	7.2	4,499	7.0
Scholarships and fellowships	4,685	8.8	5,234	8.2	6,975	10.0	7,499	11.7
Total educational and general (E&G) expenditures	47,791	90.0	57,394	90.2	63,039	90.6	58,209	91.0
Mandatory transfers	735	--	767	--	654	--	533	--
Educational and general (E&G) expenditures and mandatory transfers	48,256	--	58,161	--	63,693	--	58,742	--
Auxiliary enterprises	5,335	10.0	6,254	9.8	6,542	9.4	5,779	9.0
Total current funds expenditures and mandatory transfers	53,591	--	64,415	--	70,235	--	64,541	--

Source: Audited statements of current fund revenues, expenditures and other changes of The American University, Fiscal Years 1973-74 to 1982-83.

Table 18

The Catholic University of America, Comparative Statement of Revenues, Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years, 1973-74 -- 1982-83 (in $000)

	1973-74		1974-75		1975-76	
	Amount	% of Distri-bution	Amount	% of Distri-bution	Amount	% of Distri-bution
Current fund revenues	26,633	100.0	27,927	100.0	29,594	100.0
Educational and general revenues:						
Tuition and fees	12,858	48.3	13,875	49.7	15,550	52.5
Federal government	4,281	16.1	4,456	16.0	4,417	15.0
Private gifts, grants, and contracts	5,178	19.4	5,345	19.1	5,222	17.6
Endowment income	406	1.5	446	1.6	440	1.5
Sales and services of educational activities	133	0.5	120	0.4	123	0.4
Total educational and general (E&G) revenues	22,856	85.8	24,242	86.8	25,752	87.0
Sales and services of auxiliary enterprises	2,133	8.0	2,615	9.4	3,013	10.2
Other	1,644	6.2	1,070	3.8	829	2.8
Current fund expenditures	25,172	100.0	27,380	100.0	29,222	100.0
Educational and general expenditures:						
Instruction	11,097	44.0	12,504	45.7	13,231	45.3
Research	1,933	7.7	2,104	7.7	1,958	6.7
Public service	321	1.3	328	1.2	306	1.0
Academic support	1,822	7.2	1,366	5.0	1,454	5.0
Student services	1,097	4.4	1,217	4.4	1,250	4.3
Institutional support	2,285	9.1	2,475	9.0	2,749	9.4
Operation and maintenance of plant	1,656	6.6	1,966	7.2	2,040	7.0
Scholarships and fellowships	2,750	10.9	2,817	10.3	3,230	11.0
Total educational and general (E&G) expenditures	22,961	91.2	24,777	90,5	26,218	89.7
Mandatory transfers	1,429	--	1,033	--	748	--
Educational and general (E&G) expenditures and mandatory transfers	24,390	--	25,810	--	26,966	--
Auxiliary enterprises	2,211	8.8	2,603	9.5	3,004	10.3
Total funds expenditures and mandatory transfers	26,601	--	28,413	--	29,970	--

Source: Audited statements of current fund revenues, expenditures and other changes of The Catholic University of America; Fiscal Years 1973-74 to 1982-83.

Table 18 (continued)

The Catholic University of America, Comparative Statement of Revenues, Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83 (in $000)

	1976-77		1977-78		1978-79	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	31,251	100.0	34,100	100.0	36,918	100.0
Educational and general revenues:						
Tuition and fees	17,183	55.0	19,013	55.8	20,925	56.7
Federal government	4,093	13.1	4,136	12.1	4,453	12.0
Private gifts, grants, and contracts	5,554	17.8	5,517	16.2	5,385	14.6
Endowment income	510	1.6	506	1.5	563	1.5
Sales and services of educational activities	190	0.6	150	0.4	140	0.4
Total educational and general (E&G) revenues	27,530	88.1	29,322	86.0	31,466	85.2
Sales and services of auxiliary enterprises	3,200	10.2	3,442	10.1	3,750	10.2
Other	521	1.7	1,336	3.9	1,702	4.6
Current fund expenditures	31,867	100.0	32,840	100.0	35,035	100.0
Educational and general expenditures:						
Instruction	13,749	43.1	14,196	43.2	14,956	42.7
Research	2,087	6.5	2,142	6.4	2,494	7.2
Public service	395	1.2	362	1.1	366	1.0
Academic support	1,531	5.0	1,603	5.0	1,610	4.6
Student services	1,374	4.3	1,520	4.6	1,559	4.4
Institutional support	3,246	10.2	2,774	8.4	2,988	8.5
Operation and maintenance of plant	2,621	8.2	2,605	8.0	2,903	8.3
Scholarships and fellowships	3,479	10.9	4,275	13.0	4,456	12.7
Total educational and general (E&G) expenditures	28,482	89.4	29,477	89.8	31,332	89.4
Mandatory transfers	385	--	682	--	1,485	--
Educational and general (E&G) expenditures and mandatory transfers	28,867	--	30,159	--	32,817	--
Auxiliary enterprises	3,385	10.6	3,363	10.2	3,703	10.6
Total funds expenditures and mandatory transfers	32,252	--	33,522	--	36,520	--

Source: Audited statements of current fund revenues, expenditures and other changes of The Catholic University of America; Fiscal Years 1973-74 to 1982-83.

Table 19

Georgetown University, Comparative Statement of Revenues, Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years, 1973-74 -- 1982-83 (in $000)

Current fund revenues, expenditures and mandatory transfers	1973-74		1974-75		1975-76	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	80,253	100.0	95,555	100.0	112,583	100.0
Educational and general revenues:						
Tuition and fees	24,788	30.9	27,598	28.8	33,490	29.7
Federal government	13,658	17.0	17,420	18.2	18,931	16.8
Private gifts, grants, and contracts	6,927	8.6	8,868	9.3	7,093	6.3
Endowment and other investment income	1,730	2.2	2,091	2.3	1,997	1.8
Sales and services of educational activities	2,702	3.3	3,104	3.2	7,224	6.4
Total educational and general (E&G) revenues	49,805	62.0	59,081	61.8	68,735	61.0
Auxiliary enterprises	5,445	6.8	7,257	7.6	7,183	6.4
Hospital revenues	23,919	29.8	28,639	30.0	35,697	31.7
Other	1,084	1.4	578	0.6	968	0.9
Current fund expenditures	79,717	100.0	92,055	100.0	109,209	100.0
Educational and general expenditures:						
Instruction	26,309	33.0	31,829	34.6	37,916	34.7
Research	6,906	8.7	6,421	7.0	8,315	7.6
Academic support	1,995	2.5	2,362	2.6	2,641	2.4
Student services	3,174	3.9	3,719	4.0	3,401	3.1
Institutional support	5,351	6.7	4,859	5.3	5,467	5.0
Operation and maintenance of plant	4,550	5.7	5,232	5.7	5,853	5.4
Scholarships and fellowships	2,115	2.7	2,593	2.8	3,296	3.0
Total educational and general (E&G) expenditures	50,400	63.2	57,015	62.0	66,889	61.2
Mandatory transfers	1,444	--	3,647	--	1,668	--
Total Educational and general (E&G) expenditures and mandatory transfers	51,844	--	60,662	--	68,557	--
Auxiliary enterprises	5,592	7.0	6,718	7.2	6,972	6.4
Hospital	23,725	29.8	28,322	30.8	35,348	32.4
Total current funds expenditures and mandatory transfers	81,161	--	95,702	--	110,877	--

Source: Audited statements of current fund revenues, expenditures and other changes of Georgetown University; Fiscal Years 1973-74 to 1982-83.

Table 18 (Continued)

The Catholic University of America, Comparative Statement of Revenues, Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83 (in $000)

	1979-80		1980-81		1981-82		1982-83	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	41,805	100.0	46,850	100.0	52,950	100.0	55,734	100.0
Educational and general revenues:								
Tuition and fees	23,258	55.5	26,314	56.2	28,727	54.3	31,951	57.3
Federal government	5,936	14.2	6,279	13.4	5,684	10.7	5,751	10.3
Private gifts, grants, and contracts	6,129	14.7	6,345	13.5	9,416	17.8	8,808	15.8
Endowment income	659	1.6	688	1.5	784	1.5	838	1.6
Sales and services of educational activities	107	0.3	110	0.2	233	0.4	247	0.4
Total educational and general (E&G) revenues	36,089	86.3	39,736	84.8	44,844	84.7	47,595	85.4
Sales and services of auxiliary enterprises	4.473	10.7	5,334	11.4	6,213	11.7	6,310	11.3
Other	1,243	3.0	1,780	3.8	1,893	3.6	1,829	3.3
Current fund expenditures	40,957	100.0	45,896	100.0	49,687	100.0	52,871	100.0
Educational and general expenditures:								
Instruction	17,003	41.5	18,812	41.0	20.050	40.4	20,883	49.5
Research	3,069	7.5	3,161	6.9	3,508	7.0	3,822	7.2
Public service	299	0.7	323	0.7	587	1.2	538	1.0
Academic support	1,785	4.4	1,895	4.1	2,038	4.0	2,290	4.3
Student services	2,200	5.4	2,248	4.9	2,375	4.8	2,296	4.3
Institutional support	3,797	9.3	4,154	9.1	4,430	8.9	5,432	10.3
Operation and maintenance of plant	3,469	8.6	4,150	9.0	3,954	8.0	4,527	8.6
Scholarships and fellowships	4,436	10.6	5,458	11.9	5,740	11.6	6,069	11.5
Total educational and general (E&G) expenditures	36,058	88.0	40,201	87.6	42,682	85.9	45,857	86.7
Mandatory transfers	725	--	725	--	2,654	--	1,377	--
Educational and general (E&G) expenditures and mandatory transfers	36,783	--	40,926	--	45,336	--	47,234	--
Auxiliary enterprises	4,899	12.0	5,695	12.4	7,005	14.1	7,014	13.3
Total funds expenditures and mandatory transfers	41,682	--	46,621	--	52,341	--	54,248	--

Source: Audited statements of current fund revenues, expenditures and other changes of The Catholic University of America; Fiscal Years 1973-74 to 1982-83.

Table 19 (continued)

Georgetown University, Comparative Statement of Revenues, Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years, 1973-74 -- 1982-83 (in $000)

Current fund revenues, expenditures and mandatory transfers	1976-77		1977-78		1978-79	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	135,171	100.0	150,012	100.0	161,897	100.0
Educational and general revenues:						
Tuition and fees	37,942	28.1	45,265	30.2	51,913	32.1
Federal government	20,177	14.9	18,356	12.2	16,520	10.2
Private gifts, grants, and contracts	9,789	7.2	11,070	7.4	10,647	6.6
Endowment and other investment income	2,237	1.7	3,016	2.0	3,311	2.0
Sales and services of educational activities	9,013	6.7	10,125	6.7	11,268	7.0
Total educational and general (E&G) revenues	79,158	58.6	87,832	58.5	93,659	57.9
Auxiliary enterprises	8,899	6.6	9,576	6.4	10,809	6.7
Hospital revenues	46,221	34.2	51,281	34.2	56,397	34.8
Other	893	0.6	1,323	0.9	1,032	0.6
Current fund expenditures	130,476	100.0	143,929	100.0	153,693	100.0
Educational and general expenditures:						
Instruction	44,638	34.2	39,987	27.8	38,560	25.1
Research	8,960	6.9	10,843	7.5	12,353	8.0
Academic support	3,414	2.6	8,309	5.8	9,554	6.2
Student services	4,599	3.5	5,598	3.9	5,633	3.7
Institutional support	5,839	4.5	9,323	6.5	10,883	7.0
Operation and maintenance of plant	6,110	4.7	6,622	4.6	5,929	3.9
Scholarships and fellowships	4,314	3.3	5,105	3.5	5,925	3.9
Total educational and general (E&G) expenditures	77,874	59.7	85,787	59.6	88,787	57.8
Mandatory transfers	2,224	--	3,130	--	4,596	--
Total Educational and general (E&G) expenditures and mandatory transfers	80,098	--	88,917	--	93,383	--
Auxiliary enterprises	7,438	5.7	7,950	5.5	9,697	6.3
Hospital	45,164	34.6	50,192	34.9	55,209	35.9
Total current funds expenditures and mandatory transfers	132,700	--	147,059	--	158,289	--

Source: Audited statements of current fund revenues, expenditures and other changes of Georgetown University; Fiscal Years 1973-74 to 1982-83.

Table 19 (Continued)

Georgetown University, Comparative Statement of Revenues, Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years, 1973-74 -- 1982-83 (in $000)

Current fund revenues, expenditures and mandatory transfers	1979-80		1980-81		1981-82		1982-83	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	191,206	100.0	230,049	100.0	261,132	100.0	294,062	100.0
Educational and general revenues:								
Tuition and fees	58,974	30.8	66,801	29.0	76,832	29.4	86,997	29.6
Federal government	22,019	11.5	23,544	10.2	22,686	8.7	21,264	7.2
Private gifts, grants, and contracts	10,827	5.7	16,333	7.2	17,781	6.8	20,217	6.9
Endowment and other investment income	5,049	2.6	5,973	2.6	7,172	2.7	6,887	2.3
Sales and services of educational activities	13,734	7.2	19,526	8.5	25,160	9.7	35,317	12.0
Total educational and general (E&G) revenues	110,603	57.8	132,177	57.5	149,631	57.3	170,682	58.0
Auxiliary enterprises	12,522	6.5	14,507	6.3	16,296	6.2	17,994	6.1
Hospital revenues	65,586	34.3	80,312	34.9	90,187	34.5	99,618	33.9
Other	2,495	1.4	3,053	1.3	5,018	2.0	5,768	2.0
Current fund expenditures	178,234	100.0	213,762	100.0	243,416	100.0	273,266	100.0
Educational and general expenditures:								
Instruction	46,065	25.8	51,272	23.9	54,521	22.4	60,160	22.0
Research	13,525	7.6	17,456	8.3	20,037	8.2	22,447	8.2
Academic support	10,770	6.0	11,878	5.6	13,212	5.4	14,907	5.5
Student services	6,268	3.5	7,275	3.4	8,554	3.6	10,903	4.0
Institutional support	20,061	11.3	26,501	12.4	34,737	14.3	43,000	15.8
Operation and maintenance of plant	19,830	11.1	23,366	10.9	24,911	10.3	27,645	10.0
Scholarships and fellowships	8,474	4.8	10,188	4.8	11,313	4.6	10,854	4.0
Total educational and general (E&G) expenditures	124,993	70.1	147,936	69.2	167,285	68.8	189,916	69.5
Mandatory transfers	3,869	--	3,509	--	3,580	--	3,984	--
Total educational and general (E&G) expenditures and mandatory transfers	128,862	--	151,445	--	170,865	--	193,900	--
Auxiliary enterprises	7,343	4.1	7,952	3.7	8,862	3.6	9,868	3.6
Hospital	45,898	25.8	57,874	27.1	67,269	27.6	73,482	26.0
Total current funds expenditures and mandatory transfers	182,103	--	217,271	--	246,996	--	277,250	--

Source: Audited statements of current fund revenues, expenditures and other changes of Georgetown University; Fiscal Years 1973-74 to 1982-83.

Table 20

The George Washington University, Comparative Statement of Revenues, Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years, 1973-74 -- 1982-83 (in $000)

Current fund revenues, expenditures and mandatory transfers	1973-74		1974-75		1975-76	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	96,143	100.0	113,065	100.0	128,993	100.0
Educational and general revenues:						
Tuition and fees	30,496	31.7	32,571	28.8	36,353	28.2
Private gifts, grants, and contracts	20,707	21.5	23,773	21.0	26,520	20.6
Endowment and similar income	2,281	2.4	1,818	1.6	1,750	1.3
Sales and services of educational activities	--	--	--	--	--	--
Total educational and general (E&G) revenues	53,484	55.6	58,162	51.4	64,623	50.1
Auxiliary enterprises revenues	8,048	8.4	9,091	8.0	9,842	7.6
Hospital	33,317	34.7	43,598	38.6	51,470	39.9
Other	1,294	1.3	2,214	2.0	3,058	2.4
Current fund expenditures	92,763	100.0	107,598	100.0	121,544	100.0
Educational and general expenditures:						
Instruction	21,122	22.8	23,707	22.0	26,747	22.0
Research	13,912	15.0	15,424	14.3	17,725	14.6
Academic support	1,745	1.9	1,874	1.7	2,127	1.7
Institutional support	10,494	11.3	12,388	11.5	15,844	13.1
Student services	1,612	1.7	1,804	1.7	1,948	1.6
Operation and maintenance of plant	8,786	9.5	10,327	9.6	10,820	8.9
Scholarships and fellowships	1,682	1.8	1,784	1.7	2,117	1.7
Total educational and general (E&G) expenditures	59,353	64.0	67,309	62.5	77,328	63.6
Mandatory Transfers	--	--	--	--	51	--
Total educational and general (E&G) expenditures and mandatory transfers	59,353	--	67,309	--	77,379	--
Auxiliary enterprises	7,271	7.8	7,920	7.4	8,219	6.8
Hospital	26,139	28.2	32,369	30.1	35,997	29.6
Total current funds expenditures and mandatory transfers	92,763	--	107,598	0.6	121,595	--

Source: Audited statements of current fund revenues, expenditures and other changes of The George Washington University; Fiscal Years 1973-74 to 1982-83.

Table 20 (continued)

The George Washington University, Comparative Statement of Revenues, Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years, 1973-74 -- 1982-83 (in $000)

Current fund revenues, expenditures and mandatory transfers	1976-77		1977-78		1978-79	
	Amount	% of Distri-bution	Amount	% of Distri-bution	Amount	% of Distri-bution
Current fund revenues	140,013	100.0	156,693	100.0	168,855	100.0
Educational and general revenues:						
Tuition and fees	37,533	26.8	42,321	27.0	47,509	28.1
Private gifts, grants, and contracts	29,136	20.9	29,637	18.9	28,012	16.6
Endowment and similar income	2,310	1.6	2,616	1.7	3,377	2.0
Sales and services of educational activities	--	--	--	--	--	--
Total educational and general (E&G) revenues	68,979	49.3	74,574	47.6	78,898	46.7
Auxiliary enterprises revenues	10.931	7.8	11,923	7.6	13,006	7.7
Hospital	56,322	40.2	65,540	41.8	71,922	42.6
Other	3,781	2.7	4,656	3.0	5,029	3.0
Current fund expenditures	136,527	100.0	148,386	100.0	162,031	100.0
Educational and general expenditures:						
Instruction	29,747	21.8	32,444	22.0	35,438	21.9
Research	20,098	14.7	20,231	13.6	19,752	12.2
Academic support	2,266	1.7	2,625	1.8	2,879	1.8
Institutional support	18,306	13.4	19,175	12.9	21,297	13.1
Student services	2,123	1.6	2,276	1.5	2,597	1.6
Operation and maintenance of plant	12,000	8.8	13,419	9.0	14,841	9.2
Scholarships and fellowships	2,298	1.6	2,538	1.7	2,812	1.7
Total educational and general (E&G) expenditures	86,838	63.6	92,708	62.5	99,616	61.5
Mandatory transfers	46	--	89	--	28	--
Total educational and general (E&G) expenditures and mandatory transfers	86,884	--	92,797	--	99,644	--
Auxiliary enterprises	9,493	7.0	10,442	7.0	11,622	7.2
Hospital	40,196	29.4	45,236	30.5	50,793	31.3
Total current funds expenditures and mandatory transfers	136,573	--	148,475	0.6	162,059	--

Source: Audited statements of current fund revenues, expenditures and other changes of The George Washington University; Fiscal Years 1973-74 to 1982-83.

Table 20 (Continued)

The George Washington University, Comparative Statement of Revenues, Expenditures, and Other Changes, Percentage of Distribution; Fiscal Years, 1973-74 -- 1982-83 (in $000)

Current fund revenues, expenditures and mandatory transfers	1979-80		1980-81		1981-82		1982-83	
	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution	Amount	% of Distribution
Current fund revenues	188,427	100.0	215,204	100.0	246,149	100.0	273,302	100.0
Educational and general revenues:								
Tuition and fees	56,604	30.0	62,703	29.1	71,380	29.0	80,877	29.6
Private gifts, grants, and contracts	29,789	15.8	28,591	13.3	28,466	11.6	26,915	9.8
Endowment and similar income	3,695	2.0	4,300	2.0	5,904	2.4	7,313	2.7
Sales and services of educational activities	--	--	--	--	--	--	--	--
Total educational and general (E&G) revenues	90,088	47.8	95,594	44.4	105,750	43.0	115,105	42.1
Auxiliary enterprises revenues	14,274	7.6	15,705	7.3	17,105	6.9	18,643	6.8
Hospital	82,224	43.6	101,256	47.1	120,211	48.8	135,567	49.6
Other	1,841	1.0	2,649	1.2	3,083	1.3	3,987	1.5
Current fund expenditures	182,251	100.0	209,441	100.0	235,994	100.0	260,557	100.0
Educational and general expenditures:								
Instruction	41,341	22.7	45,906	21.9	52,158	22.1	56,317	21.6
Research	19,850	10.9	18,301	8.7	16,829	7.1	16,384	6.3
Academic support	3,357	1.8	4,146	2.0	4,917	2.1	5,618	2.2
Institutional support	22,034	12.1	24,780	11.8	28,600	12.1	35,412	13.6
Student services	2,858	1.6	3,348	1.6	3,574	1.5	3,653	1.4
Operation and maintenance of plant	16,290	8.9	19,403	9.3	20,610	8.7	22,847	8.8
Scholarships and fellowships	3,607	2.0	4,547	2.2	4,659	2.0	5,360	2.0
Total educational and general (E&G) expenditures	109,337	60.0	120,431	57.5	131,347	55.6	145,591	55.9
Mandatory transfers	73	--	(2)	--	1	--	5	--
Total Educational and general (E&G) expenditures and mandatory transfers	109,410	--	120,429	--	131,348	--	145,596	--
Auxiliary enterprises	13,157	7.2	14,708	7.0	16,202	6.9	17,286	6.6
Hospital	59,757	32.8	74,302	35.5	88,445	37.5	97,680	37.5
Total current funds expenditures and mandatory transfers	182,324	--	209,439	--	235,995	--	260,562	--

Source: Audited statements of current fund revenues, expenditures and other changes of The George Washington University; Fiscal Years 1973-74 to 1982-83.

Regarding the participation of these sources of revenues in the revenue structure of the individual institutions, according to the data in Table 17, The American University exhibits a substantial proportion--the highest in relation to the group and the other individual institutions --of its revenues depending on tuition and fees that has remained relatively stable between 1973 and 1983. Accordingly, this university is a typical tuition dependent institution. The proportion of contribution of the educational and general revenues as whole has experienced a slow fluctuating increase between 1973 and 1983. The Federal government's contribution exhibits a fluctuating decline in its proportions. The contribution proportions of private philanthropy through gifts, grants and contracts exhibits a fluctuating declining trend as observed in the trends in the proportion of this source of revenue. The revenues derived from endowment and similar investment income have remained relatively stable in very reduced proportions. Sales and services of educational activities do not appear to be a significant contributor to the total revenues of The American University. As a whole the contribution proportions of the educational and general revenues of The American University have experienced a relatively steady increase related to the steady increase in tuition derived revenues. Auxiliary enterprises shows a slow steady increase in the proportion of contribution to this revenue structure.

University and its trends in proportion of contribution have experienced a substantial steady increase. The contribution proportion of auxiliary enterprises has remained relatively stable showing a slight steady decline, while the proportions of hospital derived revenues has also remained relatively stable, showing, however, a slight steady increase.

The data in Table 20 show that The George Washington University has experienced a relatively steady slow decline in the proportions of educational and general revenues as a whole. Tuition and fees reflect a relatively steady and slow decline while the contribution of private gifts, grants, and contracts shows a substantial and steady decrease. Endowment and similar investment income does not appear to be a significant source of revenue for The George Washington University in relation to the size of its proportions, which have remained relatively stable since 1973-74 and 1982-83. The proportions of auxiliary enterprises show a relatively fluctuating, slowly declining trend, while the proportions of hospital derived revenues show a substantial and steady increase during this 10-year period.

It is worthwhile to observe that both Georgetown University and The George Washington University derive most of their current fund revenues from sales and services of hospitals and secondly from tuition and fees, as can be seen in the proportions of hospital derived revenues being greater than those corresponding to tuition and fees during the 10-year period (see Tables 19 and 20). However, According to the data in Table 18, The Catholic University of America derives most of its current fund revenues from tuition and fees. The proportion of this contribution has experienced a relatively steady increase. However, the contribution of the Federal government has steadily declined in conjunction with a fluctuating decline in the contribution of private philanthropy, and grants and contracts derived revenues. Endowment income and sales and services of educational activities do not occupy a relevant position in the revenue structure of The Catholic University of America. As a whole, the proportion of contribution of the educational and general revenues of The Catholic University has remained relatively stable, showing some slight fluctuations during the time period for which the data is analyzed. Auxiliary enterprise revenues have remained relatively stable in their proportion of contribution showing a relatively slow increase in contribution proportion.

The data in Table 19 show that Georgetown University has experienced a relatively steady slow decline in the proportions of its total educational and general revenues as a whole. While the proportions of tuition-and-fees-derived revenues have remained relatively stable, the contribution of the Federal government has experienced a relatively steady decline and the contribution proportion of private gifts, grants, and contracts also underwent a slow, steady decline. Sales and services of educational activities have become an important source of revenue at Georgetown according to the above description and analysis of the revenue services, both the group and the individual institutions do show a relatively unstable structure, as can be seen by the proportion in which the elements participate in the revenue structure. At the national level this structure has remained relatively stable with the exception of a relatively steady decline in the proportions of contributions of Federal government derived revenues (see Table 7).

The detected decline in the proportions of contributions of the Federal government grants and contracts, private gifts, grants and contracts and the low steady proportions of endowment and similar investment income indicate a deterioration in the sources of funds of the institutions. Neither the relative stability of auxiliary enterprise revenue proportions nor the increasing proportion in hospital revenues are fair indicators of maintained or improved financial support. The purpose of these revenues is the self-financing of their activities rather than to provide funds to cover educational and general expenditures or any other type of financial obligation.

b. Composition of current expenditures

The combined expenditure structure of the private universities studied here is composed of the following functional expenditure categories: instruction and departmental research; research; public service; academic support; institutional support; student services; operation and maintenance of plant; scholarships and fellowships; auxiliary enterprise expenditures; and hospital expenditures. The George Washington University and Georgetown University do not report expenditures for public service as such. The American University and The Catholic University of America do not report hospital expenditures. Tables 16 to 20 show the amounts and distribution in percentages of the components of the structure of expenditures for the combined universities and for the individual institutions.

The combined proportions of these institutions as a group, presented in Table 16, show a relatively steady decline in the allocation of funds for the functions of instruction and research. The proportion of expenditures for public service has remained relatively stable. The allocation of funds for academic support show a relatively fluctuating slow increase, while the expenditures for institutional support reflect a substantial relatively steady increase. The expenditure proportions related to student services have remained relatively stable, with relatively low proportions. The proportion of expenditures related to the operation and maintenance of plant has experienced a relatively steady increase and has remained stable between 1981 and 1983. The expenditure proportions for scholarships and fellowships show a slow and steady decline. As a whole, the proportion of educational and general expenditures shows a slow and steady decline. While the proportion of expenditures related to auxiliary enterprises shows a slow and relatively steady decline, the proportion of hospital expenditures shows a slow and relatively steady increasing trend. Given the variable trend in the proportion of the components of the aggregate expenditures, this structure is shown to be relatively unstable.

The individual institutions differ in trend indicators. Table 17 shows that The American University experienced a substantial decrease in the proportion of expenditures dedicated to instruction in 1974-75, but this proportion has remained relatively stable between 1975 and 1983. The expenditures for research show a slight steady decline in the proportions, while the expenditures for public service have remained relatively steady. After a substantial increase in 1974-75, the proportion of institutions' support expenditures has remained relatively stable until 1983. The proportion of academic support after a significant decline in 1974-75 has maintained relatively steady proportions. The proportion of student services expenditures shows a steady increasing trend, while that of operation and maintenance of plant remained relatively stable until 1981, showing a slight decline between 1981 and 1982. As a whole, the proportions of educational and general expenditures have remained relatively stable. Auxiliary enterprise expenditures show a steady increase between 1973 and 1982, experiencing a decline in 1983. In general terms, the expenditure structure of The American University has remained relatively stable, with the exception of the upward changing proportions of auxiliary enterprises.

According to the data in Table 18, The Catholic University of America shows a relatively steady decline in the proportions of the expenditures for instruction, while those related to research expenditure remained relatively stable as did the low proportion of public service expenditures. After a decrease in 1975 and relative stability between 1975 and 1978, the proportion of expenditures for academic support showed another decrease in 1978-79, remaining relatively stable until 1983. The proportion of expenditures for student services remained relatively steady as well as that of institutional support, which remained relatively stable until 1982, with a slight increase in 1983. The proportion of operation and maintenance of plant shows a relatively steady slow increase, while the proportion of scholarships shows a relatively slow fluctuating trend with a tendency to remain stable. As a whole the proportion of educational and general expenditures show a slow declining trend, while the proportion of auxiliary enterprises exhibit a relatively steady slow growth. Given this variable trend in the proportion of the components of the expenditure structure, this structure has a tendency to remain relatively unstable.

Georgetown University (Table 19) shows the proportion of instructional expenditures as a relatively steady slow decline, the proportion of expenditures corresponding to research are shown to be relatively unstable, with slight fluctuations between 1973 and 1980; however, this proportion has become relatively stable since 1981. Academic support exhibits a slow fluctuating increase in its proportion. Student services have maintained relatively steady proportions, showing slight fluctuations in the trends. The institutional support proportion shows a steady increasing trend. The proportion of operation and maintenance of plant shows a slow decreasing trend until 1979 and in 1980 shows a substantial increase; however, since 1981 a steady slow decline can be detected. Scholarships and fellowships underwent a steady slow decline in its proportions. As a whole, the educational and general expenditures experienced an unstable slow increasing trend. Auxiliary enterprises show a relatively steady slow decline; the proportion of derived revenues showed a steady increase until 1979, with a decline in 1980 and a slight increase in 1981, and have remained relatively stable until 1983. In general terms, the expenditure structure of Georgetown University remains relatively unstable.

Table 20 shows that The George Washington University maintained a relatively steady proportion of expenditures dedicated to instruction with slight yearly fluctuations, while research showed a steady decrease. The proportion of instructional support showed a fluctuating slow increase, while academic support has remained relatively stable. The proportion of expenditures for student services remained at relatively steady proportions. The proportion of operation and maintenance of plant and that of scholarships and fellowships has remained relatively stable. As a whole, the educational and general expenditures of The George Washington University have undergone a relatively steady decline that may be attributed to the decline in the proportion of research expenditures and the steady increase of hospital expenditures. Auxiliary enterprises show a relatively steady slow decline.

According to the above description, the combined expenditure structure of the group as well as that of the individual institutions, with the exception of The American University, has remained relatively unstable in the proportion whereby its components participate in such a structure. At the national level this expenditure structure of the aggregate of higher education institutions has remained relatively stable (see Table 9).

c. Balance sheet structure and evolution.

The combined and individual balance sheet structure of the institutions is composed of four fund groups: current fund, endowment fund, plant fund, and loan fund (see Tables 21 to 30). The Catholic University of America shows an irrelevant amount of agency funds (see Table 25) and is therefore excluded from the analysis of the combined institutions.

Table 21

The American University, The Catholic University of America, Georgetown University and The George Washington University Combined Comparative Balance Sheets, Sources and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1973-74	1974-75	Sources (+) Uses (-)	1975-76	Sources (+) (Uses (-)	1976-77	Sources (+) Uses (-)
Assets	507,291	536,654	(-) 29,363	581,891	(-) 45,237	608,631	(-) 26,740
Endowment	53,608	57,581	(-) 3,973	75,321	(-) 17,740	75,862	(-) 541
Current	62,776	62,457	(+) 319	65,664	(-) 3,207	66,157	(-) 493
Plant	368,165	390.737	(-) 22,572	412,488	(-) 21,751	436,317	(-) 23,829
Loan	22,742	25,879	(-) 3,137	28,418	(-) 2,539	30,295	(-) 1,877
Liabilities	149,530	155,515	(+) 5,985	173,474	(+) 17,959	180,009	(+) 6,535
Current	32,285	35,172	(+) 2,887	46,012	(+) 10,840	48,229	(+) 2,217
Endowment	629	559	(-) 70	2,451	(+) 1,892	486	(-) 1,965
Plant	116,536	118,609	(+) 2,073	123,616	(+) 5,007	130,194	(+) 6,578
Loan	80	1,175	(+) 1,095	1,395	(+) 220	1,100	(-) 295
Fund balances	357,761	381,139	(-) 23,378	408,417	(-) 27,278	428,622	(-) 20,205
Current	21,323	22,409	(-) 1,086	29,309	(-) 6,900	27,633	(+) 1,676
Endowment	62,147	61,898	(+) 249	63,213	(-) 1,315	65,671	(-) 2,458
Plant	251,629	272,128	(-) 20,499	288,872	(-) 16,744	306,123	(-) 17,251
Loan	22,662	24,704	(-) 2,042	27,023	(-) 2,319	29,195	(-) 2,172
Current fund revenues	--	--	(+) 271,306	--	(+) 309,028	--	(+) 345,443
Net additions (+)/deductions (-)	--	--	(+) 12,123	--	(+) 14,733	--	(+) 12,314
Current fund expenditures	--	--	(-) 260,051	--	(-) 296,483	--	(-) 377,552
Total increases (+)/ decreases (-) in fund balances	--	--	(+) 23,378	--	(+) 27,278	--	(+) 20,205

Audited Financial Statements of the American University, The Catholic University of America, Georgetown University and The George Washington University, Fiscal Years 1973-74 to 1982-83.

Table 21 (Continued)

The American University, The Catholic University of America, Georgetown University and The George Washington University Combined Comparative Balance Sheets, Sources and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1977-78	Sources (+) Uses (-)	1978-79	Sources (+) (Uses (-)	1979-80	Sources (+) Uses (-)
Assets	647,287	(-) 38,656	696,631	(-) 49,344	766,530	(-) 69,899
Endowment	83,175	(-) 7,313	92,288	(-) 9,113	104,757	(-) 12,469
Current	75,257	(-) 9,100	75,418	(-) 161	90,757	(-) 15,339
Plant	456,765	(-) 20,447	495,036	(-) 38,272	535,449	(-) 40,413
Loan	32,091	(-) 1,796	33,889	(-) 1,798	35,567	(-) 1,678
Liabilities	187,556	(+) 7,547	203,993	(+) 16,437	223,732	(+) 19,739
Current	49,786	(+) 1,557	53,704	(+) 3,918	62,332	(+) 8,628
Endowment	454	(-) 32	363	(-) 91	950	(+) 587
Plant	136,374	(+) 6,180	149,228	(+) 12,854	160,412	(+) 11,184
Loan	942	(-) 158	698	(-) 244	38	(-) 660
Fund balances	459,731	(-) 31,109	492,638	(-) 32,907	542,798	(-) 50,160
Current	33,389	(-) 5,756	38,584	(-) 5,195	42,425	(-) 3,841
Endowment	74,803	(-) 9,132	75,055	(-) 252	89,807	(-) 14,752
Plant	320,390	(-) 14,267	345,808	(-) 25,418	375,037	(-) 29,229
Loan	31,149	(-) 1,954	33,191	(-) 2,042	35,529	(-) 2,338
Current fund revenues	--	(+) 382,572	--	(+) 415,495	--	(+) 476,825
Net additions (+)/deductions (-)	--	(+) 14,359	--	(+) 13,868	--	(+) 27,903
Current fund expenditures	--	(-) 365,822	--	(-) 396,456	--	(-) 454,568
Total increases (+)/ decreases (-) in fund balances	--	(+) 31,109	--	(+) 32,907	--	(+) 50,160

Audited Financial Statements of the American University, The Catholic University of America, Georgetown University and The George Washington University, Fiscal Years 1973-74 to 1982-83.

Table 21 (Continued)

The American University, The Catholic University of America, Georgetown University and The George Washington University Combined Comparative Balance Sheets, Sources and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1980-81	Sources (+) Uses (-)	1981-82	Sources (+) (Uses (-)	1982-83	Sources (+) Uses (-)
Assets	831,532	(-) 65,002	920,264	(-) 88,732	1,032,945	(-) 112,681
Endowment	117,644	(-) 12,887	152,515	(-) 34,871	177,515	(-) 25,000
Current	101,336	(-) 10,579	147,046	(-) 45,710	170,069	(-) 23,023
Plant	574,693	(-) 39,244	579,957	(-) 5,264	643,272	(-) 63,315
Loan	37,859	(-) 2,292	40,746	(-) 2,887	42,089	(-) 1,343
Liabilities	240,165	(+) 16,433	279,569	(+) 39,404	328,905	(+) 49,336
Current	66,772	(+) 4,440	86,884	(+) 20,112	101,810	(+) 14,926
Endowment	319	(-) 631	16,637	(+) 16,318	14,846	(-) 1,791
Plant	173,036	(+) 12,624	176,017	(+) 2,981	212,226	(+) 36,209
Loan	38	--	31	(-) 7	23	(-) 8
Fund balances	591,367	(-) 48,569	640,695	(-) 49,328	704,040	(-) 63,345
Current	50,872	(-) 8,447	65,631	(-) 14,759	75,705	(-) 10,074
Endowment	101,017	(-) 11,210	130,409	(-) 29,392	155,223	(-) 24,814
Plant	401,657	(-) 26,620	403,940	(-) 2,283	431,046	(-) 27,106
Loan	37,821	(-) 2,292	40,715	(-) 2,894	42,066	(-) 1,351
Current fund revenues	--	(+) 555,601	--	(+) 628,784	--	(+) 690,711
Additions (+)/deductions (-)	--	(+) 25,715	--	(+) 19,222	--	(+) 23,316
Current fund expenditures	--	(-) 532,747	--	(-) 598,678	--	(-) 650,682
Total increases (+)/ decreases (-) in fund balances	--	(+) 48,569	--	(+) 49,328	--	(+) 63,345

Audited Financial Statements of the American University, The Catholic University of America, Georgetown University and The George Washington University, Fiscal Years 1973-74 to 1982-83.

Table 22

Combined Institutions Change in Assets, Liabilities and Fund Balances, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83

Index Numbers 1973-74 = 100

	1973-74		1974-75		1975-76		1976-77		1977-78	
	Index	% of Distri-bution	Index	% of Distri-bution	Index	% of Distri-bution	Index	% of Distri-bution	Index	% of Distri-bution
Assets										
Current	100.0	10.5	107.4	10.7	140.5	12.9	141.5	12.5	155.2	12.8
Endowment and similar funds	100.0	12.4	99.5	11.7	104.6	11.3	105.4	10.9	119.9	11.6
Plant	100.0	72.6	106.1	72.8	112.0	70.9	118.5	71.7	124.1	70.6
Loan	100.0	4.5	113.8	4.8	125.0	4.9	133.2	4.9	141.1	5.0
Total assets	100.0	100.0	105.8	100.0	114.7	100.0	120.0	100.0	127.6	100.0
Liabilities										
Current	100.0	21.6	108.9	22.6	142.5	26.5	149.4	26.8	154.2	26.5
Endowment and similar funds	100.0	0.4	88.9	0.4	389.7	1.4	77.3	0.3	72.2	0.2
Plant	100.0	77.9	101.8	76.3	106.1	71.3	111.7	72.3	117.0	72.7
Loan	100.0	0.1	1,468.8	0.7	1,743,8	0.8	1,375.0	0.6	1,177.5	10.6
Total liabilities	100.0	100.0	104.0	100.0	116.0	100.0	120.4	100.0	125.4	100.0
Fund balances										
Current	100.6	6.0	105.1	5.9	137.5	7.2	129.6	6.4	156.6	7.3
Endowment and similar funds	100.0	17.4	99.6	16,2	101.7	15.5	105.7	15.3	120.4	16.3
Plant	100.0	70.3	108.1	71.4	114.8	70.7	121.7	71.4	127.3	69.7
Loan	100.0	6.3	109.0	6.5	119.2	6.6	128.8	6.9	137.5	6.8
Total fund balances	100.0	100.0	106.5	100.0	114.2	100.0	119.8	100.0	128.5	100.0

Source: Audited financial statements of The American University, The Catholic University of America, Georgetown University and The George Washington University; Fiscal Years 1973-74 to 1982-83.

Table 22 (continued)

Combined Institutions Change in Assets, Liabilities and Fund Balances, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83
Index Numbers 1973-74 = 100

	1978-79		1979-80		1980-81		1981-82		1982-83	
	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution
Assets										
Current	172.2	13.2	195.4	13.7	219.5	14.1	284.5	16.6	331.1	17.2
Endowment and similar funds	120.1	10.8	144.6	11.8	161.4	12.2	234.2	16.0	270.9	16.5
Plant	134.5	71.1	145.4	69.9	156.1	69.1	157.5	63.0	174.7	62.3
Loan	149.0	4.9	156.4	4.6	166.5	4.6	179.2	4.4	185.1	4.0
Total assets	137.3	100.0	151.1	100.0	163.9	100.0	181.4	100.0	203.6	100.0
Liabilities										
Current	166.3	26.3	193.1	27.9	107.1	27.8	269.1	31.1	315.3	31.0
Endowment and similar funds	57.7	0.2	151.0	0.4	50.7	0.1	2,645.0	6.0	2,360.3	4.5
Plant	128.1	73.2	137.7	71.7	148.5	72.0	151.0	62.9	171.3	64.5
Loan	872.5	0.3	47.5	--	47.5	--	38.8	--	28.8	--
Total liabilities	136.4	100.0	149.6	100.0	160.6	100.0	187.0	100.0	220.0	100.0
Fund balances										
Current	181.0	7.8	199.0	7.8	238.6	8.6	307.8	10.2	355.0	10.8
Endowment and similar funds	120.8	15.3	144.5	16.5	162.5	17.1	209.8	20.4	249.8	22.0
Plant	137.4	70.2	149.0	69.1	159.6	67.9	160.5	63.0	171.3	61.2
Loan	146.5	6.7	159.6	6.6	166.9	6.4	179.7	6.4	185.6	6.0
Total fund balances	137.7	100.0	151.7	100.0	165.3	100.0	179.1	100.0	196.8	100.0

Source: Audited financial statements of The American University, The Catholic University of America, Georgetown University and The George Washington University; Fiscal Years 1973-74 to 1982-33.

Combined funds groups. The combined proportions in which the components of the fund groups participate in the balance sheet structure are shown in Table 22 for the group of institutions in conjunction with the trends in the balance sheet items expressed in index numbers. Accordingly, the combined assets, liabilities, and fund balances of the current fund have remained relatively unstable, with a steady increasing trend in the proportions of all the components of the current fund structure. The index numbers (see Table 22) indicate that the current fund assets and current fund balances increased faster than the current fund liabilities--current fund assets increased 231.1 percent, current fund balances increased 255.0 percent, and current fund liabilities increased 215.3 percent. Nevertheless, the steady increase in the proportions (see Table 22) and amounts (see Table 21) of short-term obligations shows a persistent lack of funds for the financing of short-term operations. This circumstance indicates certain declines in the combined liquidity of the institutions. Another indicator of this lack of funds is the relatively steady use of interfund loans (see Table 31); however, this practice may be justified by the growing interest rates of the external borrowing. The American University and The Catholic University seldom use internal loans, while Georgetown University and The George Washington University regularly use this type of financing. The combined interfund loan increased 53.5 percent for the combined institutions (see Table 31).

The assets, liabilities and fund balance of the endowment fund do show relatively unstable proportions (see Table 22). The proportion of endowment assets remained stable between 1973 and 1981, experiencing a substantial growth between 1981 and 1983. The index numbers (see Table 22) and the sources and uses of funds (see Table 21) reflect a steady increase in the amount allocated to endowment investments (see Table 22). The liabilities of endowment fund maintained relatively low proportions in relation to the total liabilities, even when these proportions underwent a substantial increase in fiscal year 1982-83 (see Table 22), as well as the amount of indebtedness (that shows the fastest increase in the structure) as compared to the reduced endowment liabilities of the preceding years. The proportion of the endowment fund balance experienced a slight fluctuating trend between 1973 and 1980 with a substantial increase in 1982 (see Table 21). According to the index numbers related to the endowment fund, the assets and fund balance of endowment funds grew faster than those of the plant and loan fund, but slower than those of the current fund (see Table 22).

Plant assets, liabilities, and fund balances show unstable proportions with a relatively slow trend toward decline as a consequence of increased proportions in the assets, liabilities, and fund balances of the current and endowment funds (see Table 22).

Loan assets and fund balances have remained relatively steady, while loan liabilities have remained at insignificant, low proportions (see Table 22).

According to the above description and analysis, the financial structure of the fund group has remained relatively unstable between 1973 and 1983 in relation to the proportion in which the components of the four fund groups participate in that structure. The statistics at the national level show that this structure of the fund groups for the aggregate of private higher education institutions remained stable between 1975 and 1979 (see Table 14).

Total liabilities grew faster than total assets and fund balances, which may be a sign of relative decline. Total liabilities rose by 120 percent, total assets increased by 103.6 percent, and total fund balances increased 98.2 percent (see Table 22). The analysis of sources and uses of funds shows that funds derived from increased liabilities have relatively compensated for the uses of funds applied to the increase in assets and fund balances, as well as the financing of the current operations (see Table 21). This strategy has relatively maintained the trends in accumulation of financial reserves to prepare against potential declines in enrollment, and the declining trend in the contribution of the Federal government and private philanthropy.

Fund groups of The American University. Tables 23 and 24 show that the fund groups of the American University are composed of the current, endowment, plant, and loan fund groups. Neither the endowment nor the loan fund groups show liabilities in their financial structure. According to the proportions shown in Table 22, the current, assets and liabilities and fund balances of the current fund have remained relatively unstable. The proportions of the current assets, liabilities, and fund balances show a relatively fluctuating slow increase. The indicators of change in Table 24, reveal that the current fund liabilities increased faster than the current assets and the current fund balance. The current liabilities increased by 131.2 percent, the current fund assets increased by 127.5 percent, and the current fund balance increased by 119.9 percent (see Table 24); this is an indicator of financial constraint, especially between the fiscal years 1981-82 and 1982-83 when the internal borrowing--that is not a usual practice at The American University--increased by 290.5 percent.

The proportion of endowment fund assets has remained relatively unstable, showing low fluctuations during the time period 1973 to 1983, while the proportion of endowment fund balance shows a relatively steady increase. The indicators of change in Table 24 reveal that the endowment fund assets and endowment fund balances have increased equally by 101.6 percent. This circumstance is caused by the equal amounts in assets and fund balances between 1973

Table 23

The American University Comparative Balance Sheets, Sources and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1973-74	1974-75	Sources (+) Uses (-)	1975-76	Sources (+) (Uses (-)	1976-77	Sources (+) Uses (-)
Assets	65,889	69,866	(-) 3,977	76,440	(-) 6,554	79,770	(-) 3,330
Current	6,187	8,514	(-) 2,327	9,366	(-) 852	9,344	(+) 22
Endowment and similar funds	4,777	4,814	(-) 37	4,943	(-) 129	5,129	(-) 186
Plant	51.417	52,534	(-) 1,117	57,726	(-) 5,192	60,644	(-) 2,918
Loan	3,508	40,004	(-) 496	4,405	(-) 401	4,653	(-) 248
Liabilities	16,406	17,583	(+) 1,177	21,315	(+) 3,732	22,476	(+) 1,839
Current	4,275	5,672	(+) 1,397	6,310	(+) 638	6,857	(+) 547
Endowment and similar funds	--	--	--	--	--	--	--
Plant	12,131	11,911	(-) 220	15,005	(+) 3,094	15,619	(+) 614
Loan	--	--	--	--	--	--	--
Fund balances	49,483	52,283	(-) 2,800	55,125	(-) 2,842	57,294	(-) 2,169
Current	1,912	2,842	(-) 930	3,056	(-) 214	2,487	(+) 569
Endowment and similar funds	4,777	4,814	(-) 37	4,943	(-) 129	5,129	(-) 186
Plant	39,286	40,623	(-) 1,337	42,721	(-) 98	45,025	(-) 2,304
Loan	3,509	4,004	(-) 496	4,405	(-) 401	4,653	(-) 248
Current fund revenues	--	--	(+) 34,759	--	(+) 37,858	--	(+) 39,008
Net additions (+)/deductions (-)	--	--	(+) 1,059	--	(+) 1,492	--	(+) 1,843
Current fund expenditures	--	--	(-) 33,018	--	(-) 36,508	--	(-) 38,682
Total change in fund balances	--	--	(+) 2,800	--	(+) 2,842	--	(+) 2,169

From: Audited Financial Statements of the American University, Fiscal Years 1973-74 to 1982-83.

Table 23 (continued)

The American University Comparative Balance Sheets, Sources and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1977-78	Sources (+) Uses (-)	1978-79	Sources (+) (Uses (-)	1979-80	Sources (+) Uses (-)
Assets	81,851	(-) 2,081	91,213	(-) 9,362	95,663	(-) 4,450
Current	9,512	(-) 168	10,801	(-) 1,289	13,708	(-) 2,907
Endowment and similar funds	5,149	(-) 20	5,366	(-) 217	5,569	(-) 203
Plant	62,137	(-) 1,493	70,103	(-) 7,966	71,285	(-) 1,182
Loan	5,053	(-) 400	4,943	(+) 110	5,101	(-) 158
Liabilities	22,128	(-) 348	27,154	(+) 5,026	27,569	(+) 415
Current	6,718	(-) 139	7,350	(+) 632	8,780	(+) 1,430
Endowment and similar funds	--	--	--	--	--	--
Plant	15,410	(-) 209	19,804	(+) 4,394	18,789	(-) 1,015
Loan	--	--	--	--	--	--
Fund balances	59,723	(-) 2,429	64,059	(-) 4,336	68,094	(-) 4,035
Current	2,794	(-) 307	3,451	(-) 657	4,028	(-) 1,477
Endowment and similar funds	5,149	(-) 20	5,366	(-) 217	5,569	(-) 203
Plant	46,727	(-) 1,702	50,299	(-) 3,572	52,496	(-) 2,197
Loan	5,053	(-) 400	4,943	(+) 110	5,101	(-) 158
Current fund revenues	--	(+) 41,767	--	(+) 47,825	--	(+) 55,387
Net additions (+)/deductions (-)	--	(+) 1,329	--	(+) 2,208	--	(+) 1,774
Current fund expenditures	--	(-) 40,667	--	(-) 45,697	--	(-) 53,126
Total change in fund balances	--	(+) 2,429	--	(+) 4,336	--	(+) 4,035

From: Audited Financial Statements of the American University, Fiscal Years 1973-74 to 1982-83.

Table 23 (continued)

The American University Comparative Balance Sheets, Sources and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1980-81	Sources (+) Uses (-)	1981-82	Sources (+) (Uses (-)	1982-83	Sources (+) Uses (-)
Assets	92,300	(+) 3,363	93,604	(-) 1,304	106,616	(-) 13,012
Current	11,992	(+) 1,716	11,469	(-) 523	14,078	(-) 2,609
Endowment and similar funds	6,295	(-) 726	6,984	(-) 689	9,631	(-) 2,647
Plant	68,614	(+) 2,671	69,721	(-) 1,107	77,484	(-) 7,763
Loan	5,399	(-) 298	5,430	(-) 31	5,423	(+) 7
Liabilities	25,338	(-) 2,231	25,299	(-) 39	31,196	(+) 5,897
Current	7,229	(-) 1,551	7,789	(+) 560	9,883	(+) 2,094
Endowment and similar funds	--	--	--	--	--	--
Plant	18,109	(-) 680	17,510	(-) 599	21,313	(+) 3,803
Loan	--	--	--	--	--	--
Fund balances	66,962	(+) 1,132	68,305	(-) 1,343	75,420	(-) 7,115
Current	4,763	(+) 165	3,680	(+) 1,083	4,195	(-) 515
Endowment and similar funds	6,295	(-) 726	6,984	(-) 689	9,631	(-) 2,647
Plant	50,505	(+) 1,991	52,211	(-) 1,706	56,171	(-) 3,960
Loan	5,399	(-) 298	5,430	(-) 31	5,423	(+) 7
Current fund revenues	--	(+) 63,498	--	(+) 68,553	--	(+) 67,613
Net additions (+)/deductions (-)	--	(-) 982	--	(+) 2,371	--	(+) 3,490
Current fund expenditures	--	(-) 63,648	--	(-) 69,581	--	(-) 63,988
Total change in fund balances	--	(-) 1,132	--	(+) 1,343	--	(+) 7,115

From: Audited Financial Statements of the American University, Fiscal Years 1973-74 to 1982-83.

Table 24

The American University, Change in Assets, Liabilities and Fund Balances, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83

Index Numbers 1973-74 = 100

	1973-74		1974-75		1975-76		1976-77		1977-78	
	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution
Assets										
Current	100.0	9.4	137.6	12.2	151.4	12.2	151.0	11.7	153.7	11.6
Endowment	100.0	7.3	100.7	6.9	103.5	6.5	107.4	6.5	107.8	6.3
Plant	100.0	78.0	102.2	75.2	112.3	75.5	117.8	76.0	120.8	75.9
Loan	100.0	5.3	114.1	5.7	125.0	5.8	132.6	5.8	144.0	6.2
Total assets	100.0	100.0	106.0	100.0	116.0	100.0	121.1	100.0	124.2	100.0
Liabilities										
Current	100.0	26.1	132.7	32.3	147.6	29.6	160.5	30.5	157.1	30.4
Endowment	100.0	--	--	--	--	--	--	--	--	--
Plant	100.0	73.9	98.2	67.7	123.7	70.4	128.8	69.5	127.0	69.6
Loan	100.0	--	--	--	--	--	--	--	--	--
Total liabilities	100.0	100.0	107.2	100.0	129.9	100.0	137.0	100.0	134.9	100.0
Fund balances										
Current	100.0	3.8	148.6	5.4	159.8	5.5	130.1	4.3	146.1	4.7
Endowment	100.0	9.7	100.7	9.2	103.5	9.0	107.4	9.0	107.8	8.6
Plant	100.0	79.4	103.4	77.7	108.7	77.5	114.6	78.6	118.9	78.2
Loan	100.0	7.1	114.1	7.7	125.6	8.0	132.6	8.1	144.0	8.5
Total fund balances	100.0	100.0	105.7	100.0	111.4	100.0	115.8	100.0	120.7	100.0

Source: Audited financial statements of The American University; Fiscal Years 1973-74 to 1982-83.

Table 24 (continued)

The American University, Change in Assets, Liabilities and Fund Balances, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83
Index Numbers 1973-74 = 100

	1978-79		1979-80		1980-81		1981-82		1982-83	
	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution
Assets										
Current	174.6	11.8	221.6	14.3	193.8	13.0	185.4	12.2	227.5	13.2
Endowment	112.3	5.9	116.6	5.8	131.8	6.8	146.2	7.5	201.6	9.0
Plant	136.3	76.9	138.6	74.5	133.4	74.3	135.6	74.5	150.7	72.7
Loan	140.9	5.4	145.4	5.4	153.9	5.9	154.8	5.8	154.6	5.1
Total assets	138.4	100.0	145.2	100.0	140.1	100.0	142.1	100.0	161.8	100.0
Liabilities										
Current	171.9	27.1	205.4	31.8	169.1	28.5	182.2	30.8	231.2	31.7
Endowment	--	--	--	--	--	--	--	--	--	--
Plant	163.3	72.9	154.9	68.2	149.3	71.5	144.3	69.2	175.7	68.3
Loan	--	--	--	--	--	--	--	--	--	--
Total liabilities	165.5	100.0	168.0	100.0	154.4	100.0	154.2	100.0	190.1	100.0
Fund balances										
Current	180.5	5.4	257.7	7.2	249.1	7.1	192.5	5.4	219.9	5.6
Endowment	112.3	8.4	116.6	8.2	131.8	9.4	146.2	10.2	201.6	12.8
Plant	128.0	78.5	133.6	77.1	128.6	75.4	132.9	76.4	143.0	74.4
Loan	140.9	7.7	145.4	7.5	153.9	8.1	153.9	8.0	154.6	7.2
Total fund balances	129.5	100.0	137.6	100.0	135.3	100.0	138.0	100.0	152.4	100.0

Source: Audited financial statements of The American University; Fiscal Years 1973-74 to 1982-83.

and 1983. The indices of change (Table 24) and the sources and uses of funds (Table 23) reflect a relatively steady slow increase in the allocation of resources to the endowment funds.

The proportions of plant assets show a relatively steady slow decrease, the proportions of plant liabilities show a relatively slightly fluctuating slow decrease, while the proportions of plant fund balances show a relatively steady slow increase (see Table 24). The indicators of change show that plant fund liabilities have increased faster than plant fund assets and plant fund balances; plant fund liabilities increased by 75.7 percent, plant fund assets increased by 50.7 percent, and plant fund balances increased 43.0 percent. The trends in the indices of change (see Table 24) and the sources and uses of funds show a steady increase in the allocation of resources to the plant fund group.

The proportions of the loan fund assets and fund balances have remained relatively unchanged and relatively fluctuating. Since this fund does not show liabilities in its financial structure, its assets and funds balance rose equally by 54.6 percent (see Table 24). According to the indices of change (see Table 24) and the sources and uses of funds (see Table 24), the allocation of funds to the loan funds has experienced a relatively slow increase.

In general terms, the balance sheet structure of The American University has remained relatively unstable according to the proportions in which the components of the fund groups have participated in this financial structure. This structure exhibits signs of deterioration, such as the already mentioned fact that current liabilities have risen faster than current assets and fund balances and the same circumstance is applicable to the plant fund group. Moreover, the uses and sources of funds, shown in Table 23, reveal a relatively steady use of credit (increased liabilities) as a source of funds. In 1980-81, the total fund balances showed a decline as a consequence of the decrease in the fund balances of the current, endowment, and plant fund, as well as a decrease in the current fund and plant fund assets (see Table 23). This decline in assets and fund balances indicates a deterioration of the capital structure due to increases in the working capital and the use of financial reserves as sources of funds as well as the inability of the current fund revenues and additions to cover the short-term operation of the year.

Fund groups of The Catholic University of America. The balance sheet structure of The Catholic University of America is composed of the current, endowment, plant, loan, and agency fund groups (see Tables 25 and 26). Due to the irrelevant amount of agency funds, this fund is excluded from the analysis.

According to the data in Table 26, the current fund assets of The Catholic University of America show a

Table 25

The Catholic University of America Comparative Balance Sheets, Sources and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1973-74	1974-75	Sources (+) Uses (-)	1975-76	Sources (+) (Uses (-)	1976-77	Sources (+) Uses (-)
Assets	61,154	61,570	(-) 416	64,390	(-) 2,820	65,764	(-) 1,374
Current	4,437	4,120	(+) 317	4,111	(+) 9	2,956	(+) 1,155
Endowment	9,317	9,228	(+) 89	10,090	(-) 862	10.820	(-) 730
Plant	43,372	43,999	(-) 627	45,718	(-) 1,719	47,353	(-) 1,635
Loan	3,933	4,167	(-) 234	4,413	(-) 246	4,606	(-) 193
Agency	95	56	(+) 39	58	(-) 2	29	(+) 29
Liabilities	12,006	11,316	(-) 690	10,948	(-) 368	10,435	(-) 513
Current	3,318	3,190	(-) 128	4,081	(+) 891	3,857	(-) 224
Endowment	--	--	--	--	--	--	--
Plant	8,626	8,028	(-) 598	6,867	(-) 1,161	6,578	(-) 289
Loan	62	98	(+) 36	--	(-) 98	--	--
Agency	--	--	--	--	--	--	--
Fund balances	49,148	50,254	(-) 1,106	53,442	(-) 3,188	55,329	(-) 1,887
Current	1,119	930	(+) 189	30	(+) 900	(901)	(+) 931
Endowment	9,317	9,228	(+) 89	10,090	(-) 862	10,820	(-) 730
Plant	34,746	35,971	(-) 1,225	38,851	(-) 2,880	40,775	(-) 1,924
Loan	3,871	4,069	(-) 198	4,413	(-) 344	4,606	(-) 193
Agency	95	56	(+) 39	58	(-) 2	29	(+) 29
Current fund revenues	--	--	(+) 27,927	--	(+) 29,594	--	(+) 31,251
Net additions (+)/deductions (-)	--	--	(+) 559	--	(+) 2,816	--	(+) 2,503
Current fund expenditures	--	--	(-) 27,380	--	(-) 29,222	--	(-) 31,867
Increase (+)/decrease (-) in fund balance	--	--	(+) 1,106	--	(+) 3,188	--	(+) 1,887

From: Audited Financial Statements of The Catholic University of America Fiscal Years 1973-74 to 1982-83

Table 25 (continued)

The Catholic University of America Comparative Balance Sheets, Sources and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1977-78	Sources (+) Uses (-)	1978-79	Sources (+) (Uses (-)	1979-80	Sources (+) Uses (-)
Assets	70,252	(-) 4,488	73,903	(-) 3,651	77,558	(-) 3,655
Current	6,256	(-) 3,300	8,942	(-) 2,686	11,075	(+) 2,133
Endowment	10,967	(-) 147	11,551	(-) 584	12,208	(-) 657
Plant	48,228	(-) 875	48,296	(-) 68	48,876	(-) 580
Loan	4,780	(-) 174	5,061	(-) 281	5,365	(-) 304
Agency	21	(+) 8	53	(-) 32	34	(+) 19
Liabilities	13,885	(+) 3,450	15,544	(+) 1,659	16,565	(+) 1,021
Current	4,835	(+) 978	6,960	(+) 2,125	8,053	(+) 1,093
Endowment	--	--	--	--	--	--
Plant	9,050	(+) 2,472	8,584	(-) 466	8,512	(-) 72
Loan	--	--	--	--	--	--
Agency	--	--	--	--	--	--
Fund balances	56,367	(-) 1,038	58,359	(-) 1,992	60,993	(-) 2,634
Current	1,421	(-) 2,322	1,982	(-) 561	3,022	(-) 1,040
Endowment	10,967	(-) 147	11,551	(-) 584	12,208	(-) 657
Plant	39,178	(+) 1,597	39,712	(-) 534	40,364	(-) 652
Loan	4,780	(-) 174	5,061	(-) 281	5,365	(-) 304
Agency	21	(+) 8	53	(-) 32	34	(+) 19
Current fund revenues	--	(+) 34,100	--	(+) 36,918	--	(+) 41,805
Net additions (+)/deductions (-)	--	(-) 222	--	(+) 109	--	(+) 1,786
Current fund expenditures	--	(-) 32,840	--	(-) 35,035	--	(-) 40,957
Increase (+)/decrease (-) in fund balance	--	(+) 1,038	--	(+) 1,992	--	(+) 2,634

From: Audited Financial Statements of The Catholic University of America Fiscal Years 1973-74 to 1982-83

Table 25 (continued)

The Catholic University of America Comparative Balance Sheets, Sources and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1980-81	Sources (+) Uses (-)	1981-82	Sources (+) (Uses (-)	1982-83	Sources (+) Uses (-)
Assets	84,030	(-) 6,472	95,739	(-) 11,709	104,425	(-) 8,686
Current	9,551	(+) 1,524	16,892	(-) 7,341	19,351	(-) 2,459
Endowment	14,807	(-) 2,599	16,187	(-) 1,380	18,362	(-) 2,175
Plant	54,260	(-) 5,384	56,666	(-) 2,406	60,589	(-) 3,923
Loan	5,375	(-) 10	5,952	(-) 577	6,062	(-) 110
Agency	37	(-) 3	42	(-) 5	61	(-) 19
Liabilities	18,614	(+) 2,049	22,487	(+) 3,873	24,834	(+) 2,347
Current	6,080	(-) 1,973	10,206	(+) 4,126	13,149	(+) 2,943
Endowment	--	--	1	(+) 1	--	--
Plant	12,534	(+) 4,022	12,280	(-) 254	11,685	(-) 595
Loan	--	--	--	--	--	--
Agency	--	--	--	--	--	--
Fund balances	65,416	(-) 4,423	73,252	(-) 7,836	79,591	(-) 6,339
Current	3,471	(-) 449	6,686	(-) 3,215	6,202	(+) 484
Endowment	14,807	(-) 2,599	16,186	(-) 1,379	18,362	(-) 2,176
Plant	41,726	(-) 1,362	44,386	(-) 2,660	48,904	(-) 4,518
Loan	5,375	(-) 10	5,952	(-) 577	6,062	(-) 110
Agency	37	(-) 3	42	(-) 5	61	(-) 19
Current fund revenues	--	(+) 46,850	--	(+) 52,950	--	(+) 55,734
Net additions (+)/deductions (-)	--	(+) 3,469	--	(+) 4,573	--	(+) 3,476
Current fund expenditures	--	(-) 45,896	--	(-) 49,687	--	(-) 52,871
Increase (+)/decrease (-) in fund balance	--	(+) 4,423	--	(+) 7,836	--	(+) 6,339

From: Audited Financial Statements of The Catholic University of America Fiscal Years 1973-74 to 1982-83

Table 26

The Catholic University of America, Change in Assets, Liabilities and Fund Balances, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83

Index Numbers 1973-74 = 100

	1973-74		1974-75		1975-76		1976-77		1977-78	
	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution
Assets										
Current	100.0	7.3	92.9	6.7	92.7	6.4	66.6	4.5	141.0	8.9
Endowment	100.0	15.2	99.0	15.0	108.3	15.7	116.1	16.5	117.7	15.6
Plant	100.0	70.9	101.4	71.5	105.4	71.0	109.2	72.0	111.2	68.7
Loan	100.0	6.4	105.9	6.8	112.2	6.9	117.11	7.0	121.5	6.8
Agency	100.0	0.2	58.9	--	61.1	--	50.0	--	22.1	--
Total assets	100.0	100.0	100.7	100.0	105.3	100.0	107.5	100.0	114.9	100.0
Liabilities										
Current	100.0	27.6	96.1	28.2	123.0	37.3	116.2	37.0	145.7	37.0
Endowment	100.0	--	--	--	--	--	--	--	--	--
Plant	100.0	71.8	93.1	70.9	79.6	62.7	76.3	63.0	104.9	63.0
Loan	100.0	0.6	158.1	0.9	--	--	--	--	--	--
Agency	--	--	--	--	--	--	--	--	--	--
Total liabilities	100.0	100.0	94.3	100.0	91.2	100.0	86.9	100.0	115.7	100.0
Fund balances										
Current	100.0	2.2	83.1	1.9	3.2	--	-80.5	-1.6	127.0	2.5
Endowment	100.0	19.0	99.0	18.4	108.3	18.9	116.1	19.6	117.7	19.5
Plant	100.0	70.7	104.3	71.6	111.8	72.7	117.4	73.7	112.8	69.5
Loan	100.0	7.9	105.1	8.0	114.0	8.3	119.0	8.3	123.5	8.5
Agency	100.0	0.2	58.9	0.1	61.1	0.1	30.5	--	22.1	--
Total fund balances	100.0	100.0	102.3	100.0	108.7	100.0	112.6	100.0	14.7	100.0

Source: Audited financial statements of The Catholic University of America; Fiscal Years 1973-74 to 1982-83.

Table 26 (continued)

The Catholic University of America, Change in Assets, Liabilities and Fund Balances, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83
Index Numbers 1973-74 = 100

	1978-79		1979-80		1980-81		1981-82		1982-83	
	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution
Assets										
Current	201.5	12.1	249.6	14.3	215.2	11.4	380.7	17.6	436.1	18.5
Endowment	124.0	15.6	131.0	15.7	158.9	17.6	173.7	17.0	197.1	17.6
Plant	111.4	65.4	112.7	63.0	125.1	64.6	130.7	59.2	139.7	58.1
Loan	128.7	6.8	136.4	7.0	136.7	6.4	51.3	6.2	154.1	5.8
Agency	55.8	0.1	35.8	--	38.9	--	44.2	--	62.2	--
Total assets	120.8	100.0	126.8	100.0	137.4	100.0	156.6	100.0	170.8	100.0
Liabilities										
Current	209.8	44.8	242.7	48.6	183.2	32.7	307.6	45.4	396.3	52.9
Endowment	--	--	--	--	--	--	--	--	--	--
Plant	99.5	55.2	98.7	51.4	145.3	67.3	142.4	54.6	88.9	47.1
Loan	--	--	--	--	--	--	--	--	--	--
Agency	--	--	--	--	--	--	--	--	--	--
Total liabilities	129.5	100.0	138.0	100.0	155.0	100.0	187.3	100.0	206.8	100.0
Fund balances										
Current	177.1	3.4	270.1	5.0	310.2	5.3	597.5	9.1	554.2	7.8
Endowment	123.9	19.8	131.0	20.0	158.9	22.6	173.7	22.1	197.1	23.1
Plant	114.3	68.0	116.2	66.2	120.1	63.8	127.7	60.6	140.7	61.4
Loan	130.7	8.7	138.6	8.8	138.9	8.2	153.8	8.1	156.6	7.6
Agency	55.8	0.1	35.8	--	38.9	0.1	44.2	0.1	62.2	0.1
Total fund balances	118.7	100.0	124.10	100.0	133.1	100.0	149.0	100.0	161.9	100.0

Source: Audited financial statements of The Catholic University of America; Fiscal Years 1973-74 to 1982-83.

relatively steady increase in their proportions, as well as those of the current fund liabilities, while the current fund balances experienced a relatively fluctuating slow increase, showing more substantial increases after 1981 with a tendency to remain unstable. In general terms, the proportions in which the assets and liabilities participate in the structure of the current fund are relatively unstable. The indices of change (see Table 26) show that the current fund balance rose faster than current assets and current liabilities; the current fund balance increased by 454.2 percent, the current fund assets increased by 336.1 percent, while the current fund liabilities rose 296.3 percent. Although this increase may indicate some degree of financial strength, the statements of sources and uses of funds (Table 25) and the trends in changes of current fund liabilities reveals a steady increase in the use of credit as a source of funds and a tendency to a relatively accelerated allocation of funds in the current fund between 1978 and 1983, with eventual sources of funds provided by decreases in the current fund assets (see Table 25). The current fund balance of The Catholic University of America experienced a serious financial decline between 1975 and 1977, but showed a relative substantial recovery between 1980 and 1983.

The proportion of endowment fund assets and fund balances shows a relatively steady slow increase with an equal total increase of 97.1 percent according to the index of change (see Table 26). The trend in the indices (see Table 26) and sources and uses of funds (see Table 25) reflects a steady allocation of resources to the endowment fund.

The proportion of plant fund assets, plant fund liabilities, and plant fund balances showed a relatively steady decline between 1973 and 1983 (see Table 26). The indicators of change (see Table 26) and the sources of funds (see Table 25) reveal a relatively steady allocation of funds to plant assets and to the repayment of plant debt which is reflected in an increased plant fund balance. Plant liabilities increased only in 1977-78 and 1980-81 (see Table 25). Plant fund liabilities decreased by 11.1 percent, while plant assets and plant fund balances decreased by 139.7 percent. Thus, plant assets and fund balances increased substantially faster than the liabilities related to plant.

The proportion of the loan fund assets experienced a relatively steady slight increase between 1973-74 and 1979-80, and started a slow and slight steady decline after this fiscal year. This proportion of loan assets and fund balances, therefore, shows a trend to remain relatively unstable. The assets of this fund increased by 54.1 percent, while the fund balance increased 56.6 percent (see Table 26). This slight difference in growth is determined by small loan liabilities paid off between 1973-74 and 1974-75. The indices of change in Table 26 and the flow of funds in Table 25 reflect a slow trend in the allocation of funds to the loan fund.

The total liabilities of The Catholic University of America rose faster than the total assets and fund balances. Total assets increased by 70.8 percent, total liabilities increased 106.8 percent, and total fund balances increased 61.9 percent (see Table 26).

Fund groups of Georgetown University. The fund groups of Georgetown University are composed of the current, endowment, plant and loan funds (see Tables 27 and 28). The proportions of the current assets show a relatively steady increase. According to the trends in the proportion of the components of the current fund, the current fund balance shows a relatively steady slow increase, while the current fund liabilities show a fluctuating slow increase. According to the indices of change in Table 28, Georgetown University shows an extraordinary increase of 1,795.7 percent in its current fund, while the current assets increased 386.9 percent and the current liabilities increased by 97.3 percent (see Table 28). The frequent use of internal borrowing that increased 113.1 percent explains the lower increase in current liabilities compared to the growing interest rates of external borrowing. This fact constitutes an indicator of relative liquidity. The indicators of change (see Table 28) and the flow of funds (see Table 27) show an accelerated allocation of funds in the current fund assets as well as in the current fund, and a relative use of credit as a source of funds. The operating surpluses show a substantial increasing trend between the fiscal years 1977-78 and 1982-83.

The proportions of assets and fund balances of the endowment fund show a relatively steady slow decline, while the liabilities of this fund have experienced a relatively steady show decline (see Table 28). According to the changing proportions, the financial structure of this fund shows a tendency to remain unstable. The endowment fund balance rose faster than the assets and liabilities of this fund. According to the indices of change in Table 28, the endowment fund balance rose relatively equally to the endowment assets, while the endowment liabilities experienced a relatively steady decline. The flow of funds in Table 27 and the indices of change in Table 28 show that this fund has experienced a substantial increase in the allocation of funds (see also Table 27) between the fiscal years 1979-80 and 1982-83. The endowment fund balance has remained relatively unchanged and showed signs of a relative decline between 1974-75 and 1976-77. This fund experienced a substantially accelerated increase between 1978-79 and 1982-83. The flow of funds reveals the eventual use of the endowment fund as a source of funds. The fund shows decreases in 1974-75, 1975-76 and 1978-79. The endowment fund assets increased 79.8 percent, the endowment fund liabilities decreased 62.8 percent, and the endowment fund balance increased 82.4 percent (see Table 28).

As for the plant fund of Georgetown University, the proportions of plant fund assets, liabilities and fund balances have remained relatively unstable, showing a relatively fluctuating slow decline. The flow of funds in Table 27 and the indices of changes (see Table 28) reflect a relatively steady increasing trend in the allocation of funds to the plant fund. Plant liabilities increased relatively faster than plant assets and fund balances. Plant liabilities increased by 129.8 percent, plant assets increased by 127.4 percent, and plant fund balance increased 126.2 percent (see Table 28).

The loan fund of Georgetown University showed relatively unstable proportions of assets, liabilities, and fund balances. The proportions of assets of the plant fund show a relatively steady increase between the fiscal years 1973-74 and 1976-77, with a relatively steady slow decline since 1977-78. The liabilities of the loan fund show a decreasing proportion with a trend to disappear. The proportion of the loan fund experienced a relatively steady slow decrease. Tables 27 and 28 show a relatively fluctuating trend in allocation of funds to the loan fund. Neither assets nor liabilities show decreases in their respective amounts. This indicates a tendency to not use this fund as a source of funds; however, this fund can be used in the

Table 27

Georgetown University Comparative Balance Sheets, Sources and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1973-74	1974-75	Sources (+) Uses (-)	1975-76	Sources (+) (Uses (-)	1976-77	Sources (+) Uses (-)
Assets	173,972	188,940	(-) 14,968	210,359	(-) 21,419	220,910	(-) 10,551
Current	16,025	15,690	(+) 335	26,449	(-) 10,759	25,173	(+) 1,276
Endowment and similar funds	35,667	35,264	(+) 403	36,722	(-) 1,458	35,358	(+) 1,364
Plant	113,873	127,698	(-) 13,825	135,587	(-) 7,889	148,026	(-) 12,439
Loan	8,407	10,288	(-) 1,881	11,601	(-) 1,313	12,353	(-) 752
Liabilities	52,674	57,713	(+) 5,039	69,273	(+) 11,560	70,919	(+) 1,646
Current	13,990	13,560	(-) 430	21,187	(+) 7,627	20,427	(-) 760
Endowment and similar funds	629	559	(-) 70	2,451	(+) 1,892	486	(-) 1,965
Plant	38,037	42,517	(+) 4,480	44,240	(+) 1,723	48,906	(+) 4,666
Loan	18	1,077	(+) 1,059	1,395	(+) 318	1,100	(-) 295
Fund balances	121,298	131,227	(-) 9,929	141,086	(-) 9,859	149,991	(-) 8,905
Current	2,035	2,130	(-) 95	5,262	(-) 3,132	4,746	(+) 516
Endowment and similar funds	35,038	34,705	(+) 333	34,271	(+) 434	34,872	(-) 601
Plant	75,836	85,181	(-) 9,345	91,347	(-) 6,216	99,120	(-) 7,773
Loan	8,389	9,211	(-) 822	10,206	(-) 995	11,253	(-) 1.047
Current fund revenues	--	--	(+) 95,555	--	(+) 112,583	--	(+) 135,171
Net additions (+)/deductions (-)	--	--	(+) 6,429	--	(+) 6,485	--	(+) 4,210
Current fund expenditures	--	--	(-) 92,055	--	(-) 109,209	--	(-) 130,476
Change in fund balance	--	--	(+) 9,929	--	(+) 9,859	--	(+) 8,905

From: Audited Financial Statements of Georgetown University Fiscal Years 1973-74 to 1982-83.

Table 27 (continued)

Georgetown University Comparative Balance Sheets, Sources
and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1977-78	Sources (+) Uses (-)	1978-79	Sources (+) (Uses (-)	1979-80	Sources (+) Uses (-)
Assets	240,278	(-) 19,368	265,954	(-) 25,676	298,736	(-) 32,782
Current	27,776	(-) 1,603	30,081	(-) 3,305	37,198	(-) 7,117
Endowment and similar funds	37,882	(-) 2,524	36,618	(+) 1,264	45,517	(-) 8,819
Plant	162,917	(-) 14,891	185,953	(-) 23,036	202,529	(-) 16,576
Loan	12,703	(-) 350	13,302	(-) 599	13,492	(-) 190
Liabilities	75,430	(+) 5,011	85,226	(+) 9,796	94,501	(+) 9,275
Current	20,617	(+) 190	21,456	(+) 839	24,200	(+) 2,744
Endowment and similar funds	454	(-) 32	363	(-) 91	950	(+) 587
Plant	53,417	(+) 4,509	62,709	(+) 9,292	69,313	(+) 6,604
Loan	942	(-) 148	698	(-) 244	38	(-) 660
Fund balances	164,848	(-) 14,857	180,728	(-) 15,880	204,235	(-) 23,507
Current	6,159	(-) 1,413	8,625	(-) 2,466	12,598	(-) 4,303
Endowment and similar funds	37,428	(-) 2,556	36,255	(+) 1,173	44,567	(-) 8,312
Plant	109,500	(-) 10,380	123,244	(-) 13,744	133,216	(-) 9,972
Loan	11,761	(-) 508	12,604	(-) 843	13,454	(-) 850
Current fund revenues	--	(+) 150,012	--	(+) 161,897	--	(+) 191,206
Net additions (+)/deductions (-)	--	(+) 8,874	--	(+) 7,676	--	(+) 10,535
Current fund expenditures	--	(-) 143,929	--	(-) 153,693	--	(-) 178,234
Change in fund balance	--	(+) 14,857	--	(+) 15,880	--	(+) 23,507

From: Audited Financial Statements of Georgetown University Fiscal Years 1973-74 to 1982-83.

Table 27 (continued)

Georgetown University Comparative Balance Sheets, Sources and Uses of Funds; Fiscal Years 1973-74 to 1982-83 (in $000)

	1980-81	Sources (+) Uses (-)	1981-82	Sources (+) (Uses (-)	1982-83	Sources (+) Uses (-)
Assets	338,459	(-) 39,723	372,485	(-) 34,026	417,196	(-) 44,711
Current	47,983	(-) 10,785	66,006	(-) 18,023	78,019	(-) 12,013
Endowment and similar funds	50,363	(-) 4,846	54,195	(+) 3,832	64,145	(-) 9,950
Plant	225,673	(-) 23,144	236,456	(-) 10,783	258,988	(-) 22,532
Loan	14,440	(-) 948	15,828	(-) 1,388	16,044	(-) 216
Liabilities	101,097	(+) 6,596	112,614	(+) 11,517	127,124	(+) 14,518
Current	28,811	(+) 4,611	36,847	(+) 8,036	39,441	(+) 2,594
Endowment and similar funds	319	(-) 631	222	(-) 97	234	(+) 12
Plant	71,929	(+) 2,616	75,514	(+) 3,585	87,426	(+) 116
Loan	38		31	(-) 7	23	(-) 8
Fund balances	237,362	(-) 33,127	259,871	(-) 22,509	290,072	(-) 30,201
Current	19,172	(-) 6,174	29,159	(-) 9,987	38,578	(-) 9,419
Endowment and similar funds	50,044	(-) 5,477	53,973	(-) 3,929	63,911	(-) 9,938
Plant	153,744	(-) 20.528	160,942	(-) 7,198	171,562	(-) 10,620
Loan	14,402	(-) 948	15,797	(-) 1,395	16,021	(-) 224
Current fund revenues	--	(+) 226,725	--	(+) 261,132	--	(+) 294,062
Net additions (+)/deductions (-)	--	(+) 16,840	--	(+) 4,793	--	(+) 9,405
Current fund expenditures	--	(-) 210,438	--	(-) 243,416	--	(-) 273,266
Change in fund balance	--	(+) 33,127	--	(+) 22,509	--	(+) 30,201

From: Audited Financial Statements of Georgetown University Fiscal Years 1973-74 to 1982-83.

Table 28

Georgetown University, Change in Assets, Liabilities and Fund Balances, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83

Index Numbers 1973-74 = 100

	1973-74		1974-75		1975-76		1976-77		1977-78	
	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution
Assets										
Current	100.0	9.3	97.9	8.3	165.0	12.5	157.1	11.4	167.1	11.1
Endowment	100.0	20.5	98.9	18.7	103.0	17.5	99.1	16.0	106.2	15.8
Plant	100.0	65.4	112.1	67.6	119.1	64.5	130.0	67.0	143.0	67.8
Loan	100.0	4.8	122.4	5.4	138.0	5.5	146.9	5.6	151.1	5.3
Total assets	100.0	100.0	108.6	100.0	120.9	100.0	127.0	100.0	138.11	100.0
Liabilities										
Current	100.0	26.6	96.9	23.5	151.4	30.6	146.0	28.8	147.4	27.3
Endowment	100.0	1.2	88.9	0.9	389.7	3.5	77.3	0.7	72.2	0.6
Plant	100.0	72.2	111.8	73.7	116.3	63.9	128.6	69.0	140.4	70.8
Loan	100.0	--	5,983.3	18.9	131.7	2.0	6,111.0	1.5	5,233.0	1.2
Total liabilities	100.0	100.0	109.6	100.0	131.5	100.0	134.6	100.0	143.2	100.0
Fund balances										
Current	100.6	2.5	104.7	0.2	258.6	3.7	233.2	3.2	302.6	3.7
Endowment	100.0	28.9	99.0	26.4	97.8	24.3	99.5	23.2	106.8	22.7
Plant	100.0	62.5	112.3	64.9	120.5	64.7	130.7	66.1	144.4	66.4
Loan	100.0	6.9	109.8	7.0	121.7	7.2	134.1	7.5	140.2	7.2
Total fund balances	100.0	100.0	108.9	100.0	116.3	100.0	123.6	100.0	135.9	100.0

Source: Audited financial statements of Georgetown University; Fiscal Years 1973-74 to 1982-83.

Table 28 (continued)

Georgetown University, Change in Assets, Liabilities and Fund Balances, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83
Index Numbers 1973-74 = 100

	1978-79		1979-80		1980-81		1981-82		1982-83	
	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution
Assets										
Current	84.3	11.3	232.1	12.5	299.4	14.2	411.9	17.7	496.9	18.7
Endowment	102.7	13.8	127.6	15.2	141.2	14.9	151.9	14.5	179.8	15.4
Plant	163.3	69.9	177.9	67.8	198.2	66.6	207.6	63.5	227.4	62.1
Loan	158.2	5.0	160.5	4.5	171.8	4.3	188.3	4.3	190.8	3.8
Total assets	152.9	100.0	171.7	100.0	194.5	100.0	214.10	100.0	239.8	100.0
Liabilities										
Current	153.4	25.2	173.0	25.6	205.9	28.5	263.4	32.7	197.3	31.0
Endowment	57.7	0.4	151.0	1.0	50.7	0.3	35.3	0.2	37.2	0.2
Plant	164.9	73.6	182.2	73.3	189.1	71.1	198.5	67.1	229.8	68.8
Loan	3,877.8	0.8	211.1	--	211.1	--	172.2	--	44.4	--
Total liabilities	161.8	100.0	179.4	100.0	191.9	100.0	213.8	100.0	241.3	100.0
Fund balances										
Current	423.8	4.8	638.7	6.4	942.1	8.1	1,432.9	11.2	1,895.7	13.3
Endowment	103.5	20.1	127.2	21.8	142.8	21.1	154.0	20.8	182.4	22.1
Plant	162.5	68.1	175.7	65.2	202.7	64.8	212.2	61.9	226.2	59.1
Loan	150.2	7.0	160.4	6.6	171.7	6.1	188.3	6.1	191.0	5.5
Total fund balances	149.0	100.0	168.4	100.0	195.7	100.0	214.2	100.0	239.1	100.0

Source: Audited financial statements of Georgetown University; Fiscal Years 1973-74 to 1982-83.

form of interfund loans, which is a common practice at Georgetown University (see Table 31).

The total liabilities rose relatively equally to total assets and the total fund balances. Total liabilities increased by 141.3 percent, total assets increased by 139.9 percent, and the total fund balances increased by 139.1 percent (see Table 28). This circumstance and the persistent use of internal borrowing are symptoms of financial stress. The internal borrowing increased by 192.0 percent (see Table 31).

Fund groups of the George Washington University. Like the other universities, the fund group of The George Washington University is composed of the current, endowment, plant, and loan fund groups (see Tables 29 and 30).

The assets and liabilities of the current fund experienced a steady, slow increase, while the proportions of the current fund balance experienced a fluctuating slow decrease (see Table 30). The indices of change in Table 30 and the flow of funds in Table 29 show a slow increasing trend in the allocation of funds to the current assets, with a substantial increase between fiscal years 1981-82 and 1982-83. The funds provided by short-term credit increased substantially between 1979-80 and 1982-83; the increased liabilities and frequent use of interfund loans are an indication of financial stress. The internal borrowing, however, decreased by 87.0 percent (see Table 30); the current fund liabilities increased faster than the current fund assets and the current fund balance. The current fund liabilities increased by 267.6 percent, the current fund assets increased by 145.1 percent, and the current fund balance increased by 64.4 percent (see Table 30).

The proportion of endowment assets remained relatively stable from 1973-74 to 1976-77, then started a slow increase in 1977-78 and experienced a substantial increase between 1981-82 and 1982-83. Endowment liabilities did not exist until 1981-82 and their proportion declined in 1982-83 (see Table 30). The endowment fund balance shows a trend similar to that of the assets (see Table 30). According to trends in the proportions in which the component of the endowment fund have participated in the financial structure of this fund group, this financial structure shows a trend to remain relatively unstable. The flow of funds in Table 29 and the indices of change in Table 30 show an increasing trend in the allocation of financial resources to the endowment fund. The endowment fund assets and fund balance increased faster than endowment fund liabilities and endowment fund assets and the endowment fund balance increased faster than endowment fund liabilities, which decreased 11.0 percent. Endowment fund assets increased by 498.8 percent, while endowment fund balance increased by 386.5 percent.

The proportions of plant fund assets and liabilities of The George Washington University experienced a steady slow decrease that accelerated between 1981-82 and 1982-83, while

Table 29

The George Washington University Comparative Balance Sheets, Sources and Uses of Funds, Fiscal Years 1973-74 to 1982-83 (in $000)

	1973-74	1974-75	Sources (+) Uses (-)	1975-76	Sources (+) (Uses (-)	1976-77	Sources (+) Uses (-)
Assets	206,371	216,334	(-) 10,003	230,760	(-) 14,426	242,216	(-) 11,456
Current	26,959	29,257	(-) 2,298	35,395	(-) 6,138	38,389	(-) 2,994
Endowment	13,015	13,151	(-) 136	13,909	(-) 758	14,850	(-) 941
Plant	159,503	166,506	(-) 7,003	173,457	(-) 6,951	180,294	(-) 6,837
Loan	6,894	7,420	(-) 526	7,999	(-) 579	8,683	(-) 684
Liabilities	68,444	68,903	(+) 459	71,938	(+) 3,035	76,179	(+) 4,241
Current	10,702	12,750	(+) 2,048	14,434	(+) 1,684	17,088	(+) 2,654
Endowment	--	--	--	--	--	--	--
Plant	57,742	56,153	(-) 1,589	57,504	(+) 1,351	59,091	(+) 1,587
Loan	--	--	--	--	--	--	--
Fund balances	137,927	147,431	(-) 9,504	158,822	(-) 11,391	166,037	(-) 7,215
Current	16,257	16,507	(-) 250	20,961	(-) 4,454	21,301	(-) 340
Endowment	13,015	13,151	(-) 136	13,909	(-) 758	14,850	(-) 941
Plant	101,761	110,353	(-) 8,592	115,953	(-) 5,600	121,203	(-) 5,250
Loan	6,894	7,420	(-) 526	7,999	(-) 579	8,683	(-) 684
Current fund revenues	--	--	(+) 113,065	--	(+) 128,993	--	(+) 140,013
Net additions (+)/deductions (-)	--	--	(+) 4,037	--	(+) 3,942	--	(+) 3,729
Current fund expenditures	--	--	(-) 107,598	--	(-) 121,594	--	(-) 136,527
Change in fund balances	--	--	(+) 9,504	--	(+) 11,391	--	(+) 7,215

From: Audited Financial Statements of The George Washington University; Fiscal Years 1973-74 to 1982-83.

Table 29 (continued)

The George Washington University Comparative Balance Sheets, Sources and Uses of Funds, Fiscal Years 1973-74 to 1982-83 (in $000)

	1977-78	Sources (+) Uses (-)	1978-79	Sources (+) (Uses (-)	1979-80	Sources (+) Uses (-)
Assets	254,927	(-) 12,711	265,614	(-) 10,687	294,607	(-) 28,993
Current	40,631	(-) 2,242	42,464	(-) 1,833	42,776	(-) 312
Endowment	21,259	(-) 6,409	21,883	(-) 624	27,463	(-) 5,580
Plant	183,482	(-) 3,188	190,684	(-) 7,202	212,759	(-) 22,075
Loan	9,555	(-) 872	10,583	(-) 1,028	11,609	(-) 1,026
Liabilities	76,113	(-) 66	76,069	(-) 44	85,097	(+) 9,018
Current	17,616	(+) 528	17,938	(+) 322	21,299	(+) 3,361
Endowment	--	--	--	--	--	--
Plant	58,497	(-) 594	58,131	(-) 366	63,798	(+) 5,667
Loan	--	--	--	--	--	--
Fund balances	178,814	(-) 12,777	189,545	(-) 10,731	209,510	(-) 19,965
Current	23,015	(-) 1,714	24,526	(-) 1,511	21,477	(+) 3,049
Endowment	21,259	(-) 6,409	21,883	(-) 624	27,463	(-) 5,580
Plant	124,985	(-) 3.782	132,553	(-) 7,568	148,961	(-) 16,408
Loan	9,555	(-) 872	10,583	(-) 1,028	11,609	(-) 1,026
Current fund revenues	--	(+) 156,693	--	(+) 168,855	--	(+) 188,427
Net additions (+)/deductions (-)	--	(+) 4,470	--	(+) 3,907	--	(+) 13,789
Current fund expenditures	--	(-) 148,386	--	(-) 162,031	--	(-) 182,251
Change in fund balances	--	(+) 12,777	--	(+) 10,731	--	(+) 19,965

From: Audited Financial Statements of The George Washington University; Fiscal Years 1973-74 to 1982-83.

Table 29 (continued)

The George Washington University Comparative Balance Sheets, Sources and Uses of Funds, Fiscal Years 1973-74 to 1982-83 (in $000)

	1980-81	Sources (+) Uses (-)	1981-82	Sources (+) (Uses (-)	1982-83	Sources (+) Uses (-)
Assets	316,780	(-) 22,173	358,478	(-) 41,698	404,769	(-) 46,291
Current	48,118	(-) 5,342	58,148	(-) 10,030	66,067	(-) 7,919
Endowment	29,871	(-) 2,408	69,680	(-) 39,809	77,931	(-) 8,251
Plant	226,146	(-) 13,387	217,114	(+) 9,032	246,211	(-) 29,097
Loan	12,645	(-) 1,036	13,536	(-) 891	14,560	(-) 1,024
Liabilities	95,116	(+) 10,019	119,169	(+) 24,053	145,751	(+) 26,582
Current	24,652	(+) 3,353	32,042	(+) 7,390	39,337	(+) 7,295
Endowment	--	--	16,414	(+) 16,414	14,612	(-) 1,802
Plant	70,464	(+) 6,666	70,713	(+) 249	91,802	(+) 21,089
Loan	--	--	--	--	--	--
Fund balances	221,664	(-) 12,154	239,309	(-) 17,645	259,018	(-) 19,709
Current	23,466	(-) 1,989	26,106	(-) 2,640	26,730	(-) 624
Endowment	29,871	(-) 2,408	53,266	(-) 23,395	63,319	(-) 10,053
Plant	155,682	(-) 6,721	146,401	(+) 9,281	154,409	(-) 8,008
Loan	12,645	(-) 1,036	13,536	(-) 891	14,560	(-) 1,024
Current fund revenues	--	(+) 215,204	--	(+) 246,149	--	(+) 273,302
Net additions (+)/deductions (-)	--	(+) 6,391	--	(+) 7,490	--	(+) 6,964
Current fund expenditures	--	(-) 209,441	--	(-) 235,994	--	(-) 260,557
Change in fund balances	--	(+) 12,154	--	(+) 17,645	--	(+) 19,707

From: Audited Financial Statements of The George Washington University; Fiscal Years 1973-74 to 1982-83.

Table 30

The George Washington University, Change in Assets, Liabilities and Fund Balances, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83
Index Numbers 1973-74 = 100

	1973-74		1974-75		1975-76		1976-77		1977-78	
	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution
Assets										
Current	100.0	13.1	108.5	13.5	131.3	15.3	142.4	15.8	150.7	16.0
Endowment	100.0	6.3	101.0	6.1	106.9	6.0	114.1	6.1	163.3	8.3
Plant	100.0	77.3	104.4	77.0	108.7	75.2	113.0	74.4	115.0	72.0
Loan	100.0	3.3	107.6	3.4	116.0	3.5	126.0	3.7	138.6	3.7
Total assets	100.0	100.0	104.8	100.0	111.8	100.0	117.4	100.0	123.51	100.0
Liabilities										
Current	100.0	15.6	119.1	18.5	134.9	20.1	159.7	22.4	164.6	23.1
Endowment	--	--	--	--	--	--	--	--	--	--
Plant	100.0	84.4	97.2	81.5	99.6	79.9	102.3	77.6	101.3	76.9
Loan	--	--	--	--	--	--	--	--	--	--
Total liabilities	100.0	100.0	100.7	100.0	105.1	100.0	111.3	100.0	111.2	100.0
Fund balances										
Current	100.0	11.8	101.5	11.2	128.9	13.2	131.0	12.8	141.6	12.9
Endowment	100.0	9.4	101.0	8.9	106.9	8.8	114.1	9.0	163.3	11.9
Plant	100.0	73.8	108.4	74.9	113.9	73.0	119.1	73.0	122.8	69.9
Loan	100.0	5.0	107.6	5.0	116.0	5.0	126.0	5.2	138.6	5.3
Total fund balances	100.0	100.0	106.9	100.0	115.1	100.0	120.4	100.0	129.6	100.0

Source: Audited balance sheets of The George Washington University;
Fiscal Years 1973-74 to 1982-83.

Table 30 (continued)

The George Washington University, Change in Assets, Liabilities and Fund Balances, Percentage of Distribution; Fiscal Years 1973-74 to 1982-83
Index Numbers 1973-74 = 100

	1978-79		1979-80		1980-81		1981-82		1982-83	
	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution	Index	% of Distribution
Assets										
Current	157.5	16.0	158.7	14.5	178.5	15.2	215.7	16.2	245.1	16.3
Endowment	168.1	8.2	211.0	9.3	229.5	9.4	535.4	19.4	598.8	19.3
Plant	119.5	71.8	133.4	72.2	141.8	71.4	136.1	60.6	154.4	60.8
Loan	153.5	4.0	168.4	4.0	183.4	4.0	196.3	3.8	111.2	3.6
Total assets	128.7	100.0	142.8	100.0	153.5	100.0	173.7	100.0	196.1	100.0
Liabilities										
Current	167.6	23.6	199.0	25.0	230.3	25.9	299.4	26.9	367.6	27.0
Endowment	--	--	--	--	--	--	100.0	13.8	89.0	10.0
Plant	100.7	76.4	110.5	75.0	122.0	74.1	139.4	59.3	159.0	63.0
Loan	--	--	--	--	--	--	--	--	--	--
Total liabilities	111.1	100.0	124.3	100.0	139.0	100.0	174.1	100.0	212.9	100.0
Fund balances										
Current	150.9	13.0	132.1	10.3	144.3	10.6	158.2	10.9	164.4	10.3
Endowment	168.1	11.5	211.0	13.1	229.5	13.5	409.3	22.3	486.5	24.5
Plant	130.3	69.9	146.3	71.1	153.0	70.2	143.9	61.1	151.7	59.6
Loan	153.5	5.6	168.4	5.5	183.4	5.7	196.3	5.7	111.2	5.6
Total fund balances	137.4	100.0	151.9	100.0	160.7	100.0	173.5	100.0	187.8	100.0

Source: Audited balance sheets of The George Washington University; Fiscal Years 1973-74 to 1982-83.

Table 31

Trends in Interfund Borrowing at American University, The Catholic University of America, Georgetown University, The George Washington University and the Combined Institutions; Fiscal Years 1973-74 to 1982-83

1973-74 = 100
(in $000)

	The American University		The Catholic University of America		Georgetown University		The George Washington University		Combined Institutions	
Fiscal Year	1 Amount	2 Index	3 Amount	4 Index	5 Amount	6 Index	7 Amount	8 Index	9 Amount	10 Index
1973-74	200	100.0	142	100.0	4,836	100.0	2,233	100.0	7,411	100.0
1974-75	150	75.0	7	4.9	4,548	94.0	2,044	91.5	6,824	92.1
1975-76	--	--	--	--	7,628	157.7	163	7.3	7,791	105.1
1976-77	--	--	--	--	8,118	167.9	1,367	61.2	9,485	128.0
1977-78	--	--	--	--	4,311	89.1	797	35.7	5,108	68.9
1978-79	--	--	--	--	5,208	107.7	1,110	49.7	6,318	85.2
1979-80	--	--	--	--	5,024	103.9	4,780	214.1	9,804	132.3
1980-81	--	--	--	--	7,934	164.1	2,652	118.8	10,586	142.8
1981-82	--	--	--	--	18,758	387.9	2,995	134.1	21,753	293.5
1982-83	781	390.5	--	--	10,307	213.1	292	13.0	11,380	153.5

Source: Audited balance sheets of The American University, The Caholic University of America, Georgetown University and The Georgetown University; Fiscal years 1973-74 to 1982-83.

Table 32

Combined Institutions, Summary of Financial Ratios; Fiscal Years 1973-74 to 1982-83

	1973-74	1974-75	1975-76	1976-77	1977-78
Ratios*					
Current ratio	1.7	1.6	1.6	1.6	1.7
Liquidity ratio	1.4	1.4	1.1	1.1	1.4
Equity ratio	3.4	3.5	3.4	3.4	3.5
Capital fund balance ratio	0.4	0.3	0.3	0.3	0.3
Plant equity ratio	2.2	2.4	2.4	2.5	2.2
Long-term (plant) debt to revenue ratio	0.5	0.4	0.4	0.4	0.3
Contribution of tuition	54.6%	53.5%	54.3%	52.0%	54.5%
Contribution of government	10.9%	14.1%	13.3%	12.2%	10.8%
Contribution of private philanthropy	21.2%	21.1%	19.3%	19.8%	19.2%
Contribution of endowment and similar income	3.1%	2.8%	2.3%	2.5%	2.8%
Contribution of sales and services of educational activities	1.7%	1.8%	3.6%	4.0%	4.1%
Revenue allocation for instruction	48.3%	46.7%	48.0%	48.9%	44.6%
Revenue allocation for research	16.3%	15.1%	15.6%	15.7%	15.6%
Revenue allocation for public service	0.4%	0.3%	0.3%	0.4%	0.3%
Revenue allocation for academic support	6.2%	4.8%	4.9%	5.3%	7.3%
Revenue allocation for institutional support	13.5%	14.3%	15.0%	15.6%	16.1%
Revenue allocation for operation and maintenance of plant	11.7%	11.7%	11.4%	11.6%	11.5%
Net total revenues to total revenues	0.9%	2.1%	3.0%	1.3%	3.2%
Net educational and general revenues to educational and general revenues	-9.1%	-7.2%	-7.6%	-10.5%	-9.4%
Net auxiliary enterprises revenues to auxiliary enterprises revenues	4.8%	10.4%	11.2%	12.9%	14.6%
Net hospital revenue to hospital revenue	12.9%	16.0%	18.2%	19.7%	18.3%

Source: Audited financial statements of The American University, The Catholic University of America, Georgetown University and The George Washington University: Fiscal Years 1973-74 to 1982-83.

* Ratios are computed from the data in the combined financial statements of the institutions (Tables 16, 21, and 36);

the proportion of plant fund balance remained relatively stable between the fiscal years 1973-74 and 1976-77 and started a decrease in the fiscal year 1977-78 that accelerated between 1981-82 and 1982-83 (see Table 30). Consequently, the financial structure of the plant fund exhibits a relatively unstable trend according to the proportions, to the degree that the components of the plant fund participate in such a financial structure. The flow of funds in Table 29 and the indices of change in Table 30 show a persistent increase in the allocation of funds to the assets and fund balance of the plant fund, as well as a persistent increase in the financial resources derived from long-term debt. Sources of funds derived from decreases in plant assets and fund balances are relatively non-existent; however, in the fiscal year 1981-82, plant assets and fund balances experienced a decrease (see Table 29). Plant fund liabilities rose faster than plant fund assets and plant fund balance plant fund liabilities increased 59.0 percent, plant assets and plant fund balances increased by 54.4 percent and 51.7 percent, respectively (see Table 30).

The loan fund assets of The George Washington University show a relatively slight, slow steady increase between fiscal years 1973-74 and 1979-80, experiencing a relatively steady slow decline after 1980-81. While the proportion of loan fund balances has remained relatively stable (see Table 30), the flow of funds in Table 29 and the indices of change in Table 30 reflects a continuous allocation of funds in the loan fund. Since the loan fund of The George Washington University does not exhibit liabilities, the loan fund assets and fund balance rose equally by 111.2 percent.

The total liabilities of The George Washington University rose faster than the total assets and total fund balances. The total liabilities rose by 112.9 percent and the total assets, and total fund balances increased by 59 percent and 87 percent, respectively. This circumstance is an indication of relative deterioration in financial condition signifying lack of equity in the institutional assets.

2. Financial Condition of the Institutions.

a. Determination of financial health.

The financial health of the institution will be analyzed according to the results obtained from the calculation of the following financial ratios.

- Current ratio;
- Liquidity ratio;
- Capital fund balance ratio;
- Long-term (plant) debt to revenue ratio; and
- Equity ratio.

Current ratio. This ratio, which measures the ability of the institutions to pay off their short-term obligations (Minter & Bowen, 1978), was computed for the combined institutions and for each institution individually. For the combined institutions this ratio shows a trend to remain stable and reveals a relative steady trend without showing signs of deterioration (see Table 32), and maintains better

Table 32 (continued)

Combined Institutions, Summary of Financial Ratios;
Fiscal Years 1973-74 to 1982-83

	1978-79	1979-80	1980-81	1981-82	1982-83
Ratios*					
Current ratio	1.7	1.7	1.8	1.8	1.7
Liquidity ratio	1.4	1.3	1.4	1.4	1.5
Equity ratio	3.4	3.4	3.5	3.3	3.1
Capital fund balance ratio	0.3	0.3	0.3	0.3	0.3
Plant equity ratio	2.4	2.3	2.4	2.3	2.0
Long-term (plant) debt to revenue ratio	0.3	0.3	0.3	0.3	0.3
Contribution of tuition	57.2%	54.2%	53.9%	54.3%	55.7%
Contribution of government	9.9%	10.6%	9.6%	8.5%	7.2%
Contribution of private philanthropy	17.2%	15.4%	14.7%	14.6%	13.3%
Contribution of endowment and similar income	3.1%	3.4%	3.4%	3.7%	3.7%
Contribution of sales and services of educational activities	4.3%	4.3%	5.3%	6.2%	8.0%
Revenue allocation for instruction	43.1%	43.4%	43.1%	42.3%	41.2%
Revenue allocation for research	15.2%	13.9%	13.3%	12.5%	11.7%
Revenue allocation for public service	0.3%	0.3%	0.4%	0.4%	0.3%
Revenue allocation for academic support	7.5%	7.4%	7.6%	7.6%	7.4%
Revenue allocation for institutional support	16.9%	18.8%	20.1%	21.6%	23.8%
Revenue allocation for operation and maintenance of plant	11.2%	15.5%	16.1%	15.2%	15.2%
Net total revenues to total revenues	2.9%	3.5%	3.2%	3.7%	4.9%
Net educational and general revenues to educational and general revenues	-9.1%	-13.7%	-15.1%	-14.5%	-13.9%
Net auxiliary enterprises revenues to auxiliary enterprises revenues	11.6%	19.4%	20.9%	20.1%	22.8%
Net hospital revenue to hospital revenue	17.4%	28.5%	27.2%	26.0%	27.2%

Source: Audited financial statements of The American University, The Catholic University of America, Georgetown University and The George Washington University: Fiscal Years 1973-74 to 1982-83.

* Ratios are computed from the data in the combined financial statements of the institutions (Tables 16, 21, and 36);

Table 33

The American University, Summary of Financial Ratios; Fiscal Years 1973-74 to 1982-83

	1973-74	1974-75	1975-76	1976-77	1977-78
Ratios					
Current ratio	1.4	1.5	1.5	1.4	1.4
Liquidity ratio	0.8	1.9	1.9	1.6	1.4
Equity ratio	4.0	4.0	3.6	3.6	3.7
Capital fund balance ratio	0.2	0.3	0.3	0.3	0.3
Plant equity ratio	2.8	3.1	3.6	3.9	2.9
Long-term (plant) debt to revenue ratio	0.4	0.3	0.3	0.3	0.3
Contribution of tuition	75.3%	80.8%	79.4%	77.7%	78.4%
Contribution of government	--	13.7%	12.5%	11.1%	11.9%
Contribution of private philanthropy	7.2%	3.0%	3.2%	4.0%	4.4%
Contribution of endowment and similar income	2.4%	2.5%	1.8%	1.9%	1.9%
Contribution of sales and services of educational activities	0.1%	0.6%	1.3%	1.5%	0.9%
Revenue allocation for instruction	58.2%	40.3%	43.2%	42.6%	41.3%
Revenue allocation for research	7.4%	6.9%	5.8%	5.2%	6.4%
Revenue allocation for public service	1.1%	0.7%	0.7%	1.1%	1.1%
Revenue allocation for institutional support	9.1%	16.1%	14.2%	15.8%	15.2%
Revenue allocation for academic support	15.3%	8.7%	9.6%	11.3%	11.0%
Revenue allocation for operation and maintenance of plant	10.9%	8.4%	9.7%	10.3%	9.9%
Net revenues to total revenues ratios	-1.3%	2.8%	1.2%	-1.2%	0.7%
Net educational and general revenues to educational and general revenues	-17.7%	0.5%	-2.8%	-5.5%	-3.4%
Net auxiliary enterprises revenues to auxiliary enterprises revenues	10.8%	16.9%	20.6%	18.7%	23.6%

Source: Audited financial statements of The American University; Fiscal Years 1973-74 to 1982-83.

Table 33 (continued)

The American University, Summary of Financial Ratios; Fiscal Years 1973-74 to 1982-83

	1978-79	1979-80	1980-81	1981-82	1982-83
Ratios					
Current ratio	1.5	1.6	1.7	1.5	1.4
Liquidity ratio	1.5	0.8	1.0	1.1	1.3
Equity ratio	3.4	3.5	3.6	3.7	3.4
Capital fund balance ratio	0.2	0.2	0.2	0.1	0.2
Plant equity ratio	2.4	2.6	2.6	2.3	2.4
Long-term (plant) debt to revenue ratio	0.4	0.3	0.3	0.3	0.3
Contribution of tuition	78.5%	75.6%	75.8%	73.5%	82.1%
Contribution of government	13.1%	12.9%	9.7%	10.6%	8.2%
Contribution of private philanthropy	4.5%	6.6%	5.9%	6.6%	5.9%
Contribution of endowment and similar income	2.6%	3.5%	2.6%	2.2%	2.3%
Contribution of sales and services of educational activities	1.3%	1.7%	0.9%	1.5%	1.5%
Revenue allocation for instruction	40.4%	39.8%	41.8%	42.5%	41.3%
Revenue allocation for research	6.3%	6.5%	7.1%	7.8%	5.6%
Revenue allocation for public service	0.9%	1.3%	1.7%	1.6%	1.3%
Revenue allocation for institutional support	15.6%	15.8%	17.1%	16.5%	15.9%
Revenue allocation for academic support	10.8%	11.0%	12.0%	12.4%	10.4%
Revenue allocation for operation and maintenance of plant	8.9%	9.5%	9.3%	8.5%	7.8%
Net revenues to total revenues ratios	2.9%	3.2%	1.4%	2.4%	4.6%
Net educational and general revenues to educational and general revenues	-1.1%	-1.2%	-6.3%	-8.1%	-1.5%
Net auxiliary enterprises revenues to auxiliary enterprises revenues	22.6%	22.5%	24.0%	25.1%	34.4%

Source: Audited financial statements of The American University; Fiscal Years 1973-74 to 1982-83.

Table 34

The Catholic University of America, Summary of Financial Ratios; Fiscal Years 1973-74 to 1982-83

	1973-74	1974-75	1975-76	1976-77	1977-78
Ratios					
Current ratio	1.3	1.3	1.0	0.8	1.3
Liquidity ratio	1.7	1.6	0.9	1.0	1.5
Equity ratio	5.1	5.4	5.9	6.3	5.1
Capital fund balance ratio	0.5	0.5	0.5	0.5	0.5
Plant equity ratio	4.2	4.6	5.7	6.2	4.3
Long-term (plant) debt to revenue ratio	0.3	0.3	0.2	0.2	0.3
Contribution of tuition	52.7%	53.8%	57.7%	59.5%	63.0%
Contribution of government	17.6%	17.3%	16.4%	14.2%	13.7%
Contribution of private philanthropy	21.2%	21.6%	19.9%	19.5%	18.7%
Contribution of endowment and similar income	1.8%	1.8%	1.7%	1.8%	1.7%
Contribution of sales and services of educational activities	0.6%	0.5%	0.5%	0.7%	0.5%
Revenue allocation for instruction	48.6%	51.6%	51.4%	49.9%	48.4%
Revenue allocation for research	7.7%	8.7%	7.6%	7.6%	7.3%
Revenue allocation for public service	1.4%	1.4%	1.2%	1.4%	1.2%
Revenue allocation for institutional support	10.0%	10.2%	10.7%	11.8%	9.5%
Revenue allocation for operation and maintenance of plant	7.2%	8.1%	7.9%	9.5%	8.9%
Net total revenues to total revenues ratios	0.1%	-1.7%	-1.3%	-3.2%	1.7%
Net educational and general revenues to total educational and general revenues	-0.5%	-2.2%	-1.8%	-3.5%	-0.5%
Net auxiliary enterprises revenues to auxiliary enterprises revenues	-3.7%	0.5%	0.3%	-5.8%	2.3%

Source: Audited financial statements of The Catholic University of America; Fiscal Years 1973-74 to 1982-83.

Table 34 (continued)

The Catholic University of America, Summary of Financial Ratios: Fiscal Years 1973-74 to 1982-83

	1978-79	1979-80	1980-81	1981-82	1982-83
Ratios					
Current ratio	1.3	1.4	1.6	1.7	1.5
Liquidity ratio	1.5	1.5	2.0	2.2	2.3
Equity ratio	4.8	4.7	4.5	4.3	4.2
Capital fund balance ratio	0.5	0.4	0.4	0.4	0.5
Plant equity ratio	4.8	4.9	3.3	3.5	3.8
Long-term (plant) debt to revenue ratio	0.2	0.2	0.3	0.2	0.2
Contribution of tuition	63.8%	63.2%	64.3%	63.4%	67.6%
Contribution of government	13.6%	16.1%	15.3%	12.5%	12.2%
Contribution of private philanthropy	17.2%	17.0%	15.8%	22.1%	19.2%
Contribution of endowment and similar income	1.8%	1.8%	1.7%	1.8%	1.8%
Contribution of sales and services of educational activities	0.4%	0.3%	0.2%	0.5%	0.5%
Revenue allocation for instruction	47.5%	47.1%	47.3%	44.7%	43.9%
Revenue allocation for research	7.2%	8.5%	8.0%	7.8%	8.0%
Revenue allocation for public service	1.2%	0.8%	0.8%	1.3%	1.1%
Revenue allocation for institutional support	9.5%	10.5%	10.5%	9.9%	11.4%
Revenue allocation for operation and maintenance of plant	9.2%	9.6%	10.4%	8.8%	9.5%
Net total revenues to total revenues ratios	1.1%	0.2%	0.5%	1.2%	2.7%
Net educational and general revenues to total educational and general revenues	0.4%	0.1%	-1.2%	4.8%	3.7%
Net auxiliary enterprises revenues to auxiliary enterprises revenues	1.3%	-9.5%	-6.8%	-12.7%	-11.2%

Source: Audited financial statements of The Catholic University of America, Fiscal Years 1973-74 to 1982-83.

Table 35

Georgetown University, Summary of Financial Ratios; Fiscal Years 1973-74 to 1982-83

	1973-74	1974-75	1975-76	1976-77	1977-78
Ratios					
Current ratio	1.2	1.2	1.3	1.2	1.3
Liquidity ratio	0.8	0.9	0.8	1.0	0.9
Equity ratio	3.3	3.3	3.0	3.1	3.2
Capital fund balance ratio	0.5	0.5	0.4	0.3	0.3
Plant equity ratio	2.0	2.1	2.3	2.1	2.2
Long-term (plant) debt to revenue ratio	0.5	0.4	0.4	0.4	0.3
Contribution of tuition	47.8%	45.5%	48.8%	47.4%	50.9%
Contribution of government	26.3%	28.7%	27.6%	25.1%	20.6%
Contribution of private philanthropy	13.4%	14.6%	10.3%	12.2%	12.4%
Contribution of endowment	3.3%	3.4%	2.9%	2.8%	3.4%
Contribution of sales and services of educational activities	5.2%	5.1%	10.5%	11.3%	11.4%
Revenue allocation for instruction	52.8%	56.9%	55.2%	56.4%	45.9%
Revenue allocation for research	13.9%	11.5%	12.1%	11.3%	12.4%
Revenue allocation for academic support	4.0%	4.7%	3.8%	4.3%	5.8%
Revenue allocation for institutional support	10.7%	8.7%	8.0%	7.4%	8.4%
Revenue allocation for operation and maintenance of plant	9.1%	9.3%	8.5%	7.7%	7.6%
Net total revenues to total revenues	-1.1%	-0.2%	1.5%	1.8%	2.0%
Net educational and general revenues to educational and general revenues	-4.1%	-2.6%	0.3%	-1.2%	-1.2%
Net auxiliary enterprises revenues to auxiliary enterprises revenues	-2.7%	7.4%	2.9%	16.4%	17.0%
Net hospital revenues to total hospital revenues	1.0%	1.0%	1.0%	2.0%	2.0%

Source: Audited financial statements of Georgetown University; Fiscal Years 1973-74 to 1982-83.

Table 35 (continued)

Georgetown University, Summary of Financial Ratios;
Fiscal Years 1973-74 to 1982-83

	1978-79	1979-80	1980-81	1981-82	1982-83
Ratios					
Current ratio	1.4	1.5	1.7	1.8	2.0
Liquidity ratio	1.2	1.3	1.3	1.2	1.3
Equity ratio	3.1	3.2	3.3	3.3	3.3
Capital fund balance ratio	0.3	0.3	0.3	0.3	0.3
Plant equity ratio	2.1	2.0	2.3	2.3	2.1
Long-term (plant) debt to revenue ratio	0.4	0.3	0.3	0.3	0.3
Contribution of tuition	55.6%	45.8%	44.1%	45.0%	44.9%
Contribution of government	17.7%	17.1%	15.5%	13.3%	11.0%
Contribution of private philanthropy	11.4%	8.4%	10.8%	10.4%	10.4%
Contribution of endowment	3.5%	3.9%	3.9%	4.2%	3.6%
Contribution of sales and services of educational activities	12.1%	10.7%	12.9%	14.7%	18.2%
Revenue allocation for instruction	41.2%	41.6%	38.8%	36.4%	35.2%
Revenue allocation for research	13.2%	12.2%	13.2%	13.4%	13.2%
Revenue allocation for academic support	10.2%	9.7%	9.0%	8.8%	8.7%
Revenue allocation for institutional support	8.3%	14.4%	14.0%	15.0%	14.2%
Revenue allocation for operation and maintenance of plant	6.3%	17.9%	17.7%	16.6%	16.2%
Net total revenues to total revenues	2.2%	4.8%	5.6%	5.4%	5.7%
Net educational and general revenues to educational and general revenues	0.3%	-17.0%	-14.6%	-14.2%	-13.6%
Net auxiliary enterprises revenues to auxiliary enterprises revenues	10.3%	41.4%	45.2%	24.6%	45.2%
Net hospital revenues to total hospital revenues	2.1%	30.0%	28.0%	25.0%	26.0%

Source: Audited financial statements of Georgetown University; Fiscal Years 1973-74 to 1982-83.

Table 36

The George Washington University, Summary of Financial Ratios: Fiscal Years 1973-74 to 1982-83

	1973-74	1974-75	1975-76	1976-77	1977-78
Ratios					
Current ratio	2.5	2.3	2.5	2.2	2.3
Liquidity ratio	1.7	1.6	1.3	1.2	1.8
Equity ratio	3.0	3.1	3.2	3.2	3.3
Capital fund balance ratio	0.2	0.2	0.2	0.2	0.2
Plant equity ratio	1.8	2.0	2.0	2.1	1.6
Long-term (plant) debt to revenue ratio	0.6	0.5	0.4	0.4	0.4
Contribution of tuition	51.3%	48.4%	47.0%	43.2%	45.6%
Contribution of private philanthropy	34.8%	35.3%	34.3%	30.1%	31.9%
Contribution of endowment and similar income	3.8%	2.7%	2.3%	2.7%	2.8%
Revenue allocation for instruction	39.5%	40.8%	41.1%	43.1%	43.5%
Revenue allocation for research	26.0%	26.5%	27.4%	29.1%	27.1%
Revenue allocation for academic support	3.3%	3.2%	3.3%	3.2%	3.5%
Revenue allocation for institutional support	18.4%	20.1%	23.2%	25.0%	24.1%
Revenue allocation for operation and maintenance of plant	16.4%	17.8%	16.7%	17.4%	18.0%
Net total revenues to total revenues	3.5%	4.8%	5.7%	2.5%	5.5%
Net educational and general revenues to educational and general revenues	-11.0%	-15.7%	-19.7%	-26.0%	-24.4%
Net auxiliary enterprises revenues to auxiliary enterprises revenues	9.7%	12.9%	16.5%	13.2%	12.8%
Net hospital revenues to total hospital revenues	21.5%	25.8%	30.1%	28.6%	31.0%

Source: Audited financial statements of The George Wahington University; Fiscal Years 1973-74 to 1982-83.

Table 36 (continued)

The George Washington University, Summary of Financial Ratios
Fiscal Years 1973-74 to 1982-83

	1978-79	1979-80	1980-81	1981-82	1982-83
Ratios					
Current ratio	2.4	2.0	2.0	1.8	1.7
Liquidity ratio	2.0	1.5	1.6	1.7	1.6
Equity ratio	3.5	3.5	3.3	3.0	2.8
Capital fund balance ratio	0.2	0.2	0.2	0.3	0.3
Plant equity ratio	2.3	2.4	2.2	2.1	1.5
Long-term (plant) debt to revenue ratio	0.3	0.3	0.3	0.3	0.3
Contribution of tuition	47.7%	51.7%	52.1%	54.3%	55.5%
Contribution of private philanthropy	28.1%	27.2%	23.7%	21.7%	18.5%
Contribution of endowment and similar income	3.4%	3.4%	3.6%	4.5%	5.0%
Revenue allocation for instruction	44.9%	45.9%	48.0%	49.3%	48.9%
Revenue allocation for research	25.0%	22.0%	19.1%	15.9%	14.2%
Revenue allocation for academic support	3.6%	3.7%	4.3%	4.6%	4.9%
Revenue allocation for institutional support	25.2%	22.6%	23.8%	24.9%	28.5%
Revenue allocation for operation and maintenance of plant	18.8%	18.1%	20.3%	19.5%	19.8%
Net total revenues to total revenues	4.0%	6.8%	2.7%	4.1%	4.7%
Net educational and general revenues to educational and general revenues	-26.3%	-21.4%	-26.0%	-24.2%	-26.5%
Net auxiliary enterprises revenues to auxiliary enterprises revenues	10.6%	7.8%	6.3%	5.3%	7.3%
Net hospital revenues to total hospital revenues	29.4%	27.3%	26.6%	26.4%	27.9%

Source: Audited financial statements of The George Wahington University; Fiscal Years 1973-74 to 1982-83.

Table 37

Combined Institutions, Liquid Assets, Investment in Plant, Plant Debt, Net Investment in Plant; Fiscal Years 1973-74 to 1982-83

(in $000)

Fiscal Year	Liquid Assets Cash and temporary investments	Accounts receivable	Total	Investment in plant	Plant debt	Net investment in plant
1973-74	12,866	30,859	43,725	355,491	112,118	243,373
1974-75	13,509	34,066	47,575	382,956	114,071	268,885
1975-76	17,262	34,713	51,975	403,853	117,106	286,747
1976-77	13,051	41,191	54,242	426,065	123,143	302,922
1977-78	24,838	42,433	67,271	417,875	132,226	285,649
1978-79	27,790	49,830	77,620	481,182	142,995	338,187
1979-80	23,811	58,645	82,456	508,813	151,918	356,895
1980-81	25,152	70,915	96,067	559,248	165,214	394,034
1981-82	51,648	74,183	125,831	570,033	171,689	398,344
1982-83	74,187	78,506	152,693	611,459	207,089	404,370

From: Aggregate data from The American University (see Table 38, The Catholic University of America (see Table 39), Georgetown University (see Table 40), and The George Washington University (see Table 41).

Table 38

The American University: Liquid Assets, Investment in Plant, Plant Debt, Net Investment in Plant; Fiscal Years 1973-74 to 1982-83

(in $000)

	Liquid Assets					
Fiscal Year	1 Cash and temporary investments	2 Accounts receivable	3 Total	4 Investment in plant	5 Plant debt	(4-5) 6 Net investment in plant
1973-74	5,626	2,728	8,354	45,704	12,127	33,577
1974-75	7,275	3,377	10,652	48,262	11,898	36,364
1975-76	8,351	3,468	11,819	53,105	11,669	41,436
1976-77	7,781	2,938	10,719	55,473	11,434	44,039
1977-78	6,089	3,296	9,385	55,826	14,303	41,523
1978-79	5,872	4,850	10,722	63,322	18,871	44,451
1979-80	2,136	5,085	7,221	67,391	18,653	48,738
1980-81	1,345	5,989	7,334	65,825	18,109	47,716
1981-82	3,986	4,684	8,670	67,136	20,532	46,604
1982-83	8,611	4,572	13,183	72,869	21,263	51,606

Source: Audited balance sheets of The American University; Fiscal Years 1973-74 to 1982-83.

Table 39

The Catholic University of America: Liquid Assets, Investment in Plant, Plant Debt, Net Investment in Plant; Fiscal Years 1973-74 to 1982-83

(in $000)

	Liquid Assets					
Fiscal Year	1 Cash and temporary investments	2 Accounts receivable	3 Total	4 Investment in plant	5 Plant debt	(4-5) 6 Net investment in plant
1973-74	4,772	1,003	5,775	42,802	8,239	34,563
1974-75	3,875	1,114	4,989	43,536	7,832	35,704
1975-76	2,876	924	3,800	45,424	6,743	38,681
1976-77	2,430	1,583	4,013	47,275	6,572	40,703
1977-78	5,349	1,809	7,158	47,970	9,016	38,954
1978-79	8,461	2,269	10,730	48,159	8,370	39,789
1979-80	9,659	2,319	11,978	48,590	8,301	40,289
1980-81	9,009	2,921	11,930	53,456	12,291	41,165
1981-82	18,674	3,297	21,971	54,515	12,001	42,514
1982-83	26,657	3,630	30,287	55,464	11,486	43,978

Source: Audited balance sheets of The Catholic University of America; Fiscal Years 1973-74 to 1982-83.

Table 40

Georgetown University: Liquid Assets, Investment in Plant, Plant Debt, Net Investment in Plant; Fiscal Years 1973-74 to 1982-83

(in $000)

	Liquid Assets					
Fiscal Year	1 Cash and temporary investments	2 Accounts receivable	3 Total	4 Investment in plant	5 Plant debt	(4-5) 6 Net investment in plant
1973-74	988	10,501	11,489	113,118	37,736	75,382
1974-75	1,241	10,590	11,831	129,490	41,234	88,256
1975-76	5,218	12,108	17,326	137,422	42,066	95,356
1976-77	1,975	18,551	20,526	148,682	47,935	100,747
1977-78	1,981	17,336	19,317	162,843	51,243	111,600
1978-79	5,652	19,029	24,681	184,412	58,633	125,779
1979-80	9,305	22,743	32,048	197,399	66,894	130,505
1980-81	8,276	29,992	38,268	222,818	67,820	154,998
1981-82	7,740	33,432	41,172	242,771	72,857	169,914
1982-83	12,074	34,341	46,415	263,367	84,821	178,546

Source: Audited balance sheets of Georgetown University; Fiscal Years 1973-74 to 1982-83.

Table 41

The George Washington University: Liquid Assets, Investment in Plant, Plant Debt, Net Investment in Plant; Fiscal Years 1973-74 to 1982-83

(in $000)

	Liquid Assets					
Fiscal Year	1 Cash and temporary investments	2 Accounts receivable	3 Total	4 Investment in plant	5 Plant debt	(4-5) 6 Net investment in plant
1973-74	1,480	16,627	18,107	153,867	54,016	99,851
1974-75	1,118	18,985	20,103	161,668	53,107	108,561
1975-76	817	18,213	19,030	167,902	56,628	111,274
1976-77	865	18,119	18,984	174,635	57,202	117,433
1977-78	11,419	19,992	31,411	151,236	57,664	93,572
1978-79	10,917	24,142	35,059	185,478	56,475	129,003
1979-80	2,711	28,498	31,209	195,433	58,070	137,363
1980-81	6,522	32,013	38,535	217,149	66,994	150,155
1981-82	21,248	32,770	54,018	205,611	66,299	139,312
1982-83	26,845	35,963	62,808	219,759	85,519	130,240

Source: Audited balance sheets of The George Washington University; Fiscal Years 1973-74 to 1982-83.

levels than those of the aggregate private higher education institutions (see Table 15). As for the individual institutions, The American University shows a current ratio with a trend to remain stable with no signs of deterioration (see Table 33); however, it shows a trend to remain lower than that of the combined institutions. The current ratio of The Catholic University of America shows a substantial improvement in the ability to repay short-term debts (see Table 33). The current ratio of Georgetown University improved substantially between 1978 and 1983 after remaining at relatively stable low proportions between 1973 and 1978; the ability to repay short-term debts of Georgetown University shows a trend of continued improvement (see Table 31) due to trends in the current assets to increase faster than the current liabilities (see Tables 27 and 28). The current ratio of The George Washington University shows signs of decline in the ability of the institution to repay current obligations. This ratio shows relatively steady slow decline between 1973-74 and 1982-83 (see Table 35). This is an indication of relative increasing short-term financial pressure. This decline is caused by the increase in the current assets being lower than that of the current liabilities (see Tables 29 and 30).

Liquidity ratio.[1] Liquid assets are shown in Tables 37-41. This ratio, which is equivalent to the "acid test" in business and industry, measures the ability to repay the current liabilities of the institutions relying on the liquid assets existing in all the fund groups; namely, cash and assets convertible to cash in the normal course of operations (Minter & Bowen, 1978), such as accounts receivables and temporary investments. The institutions as a group show a serious decline in this ratio between 1975 and 1977; however, after recovering its original proportions in 1978, they have remained relatively stable, with no signs of liquidity deterioration (see Table 32). This ratio shows a tendency to remain at higher levels than those of the aggregate of institutions at the national level (see Table 15, p. 154). The American University shows an unstable liquidity ratio with signs of deterioration in its liquid resources. The liquidity of The American University suffered a serious decline after 1976 and worsened in 1980, showing some improvement in 1983 (see Table 33). The liquidity ratio of The Catholic University of American (see Table 34) after a substantial decline in 1977, shows a steady improvement since 1978. Georgetown University (see Tables 34 and 39), after showing levels of liquidity unable to cover the current obligations of the institution, improved its liquidity ratio in 1978 and has since shown a tendency to remain at stable slow proportions. The liquidity of The George Washington University experienced a relative instability between 1973 and 1979 but then remained relatively stable until 1983.

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[1] Liquid assets are shown in Tables 37 to 41.

Both the liquidity ratio and the current ratio show that the institutions show a fair ability to repay current obligations; however, the level of these ratios (in all the institutions below 2:1) indicate short-term financial pressure, especially in the case of the institutions where the current assets have the tendency to rise slower than the current liabilities. As was detected in the analysis of the data related to Question No. 1, a subsequent decline in the revenue inflows may occur. The institutions reflecting stable or improved current and liquid ratios reflect that the growth of the current assets keeps pace with the growth in the current liabilities, while the reverse occurs with institutions showing declining current and liquidity ratios.

Capital fund balance ratio. The usual components of the capital fund are the endowment fund, the loan fund, the agency fund, and the annuity and life income fund (Minter, 1980). The universities being studied do not show either agency fund or annuity and life income fund in their financial structure. Thus, it was detected that funds not expendable for the current operation of the institutions (endowment and loan fund balances) hardly keep pace with the growth of the institutional operations. This is due to the relatively low amount of investment allocated to the endowment and loan fund. The capital fund balance ratio (endowment fund balance plus loan fund balance/current fund expenditures and mandatory transfers) of the combined institutions, although not showing signs of deterioration, do show a fixed level along the trend. Thus, the ratio has not kept pace with the growth of the institutional operations (see Table 32). The American University shows signs of a deteriorating capital fund balance structure (see Table 33). The Catholic University of America does not show any indication of relative increases in its capital fund according to the size of the operations; however, those capital fund balance ratios, after a slight decline in 1978-80, remained stable and did not relatively show signs of further deterioration. This ratio recovered its former level in 1982-83 (see Table 34). Georgetown University experienced a decline in this ratio in 1975-76, it declined again in 1978, and remained relatively stable until 1983 (see Table 34). The George Washington University maintained relatively low levels in its capital fund balance ratio and this proportion remained relatively stable until 1982, showing a shift in 1982, and remaining stable in 1982 and 1983.

Since the endowment fund that generates endowment income and the loan fund that helps students pay for tuition and fees provide future benefits to the institution, the growth of these funds should increase in accordance with the increase in the size of the operation. However, the institutions as a group and individually have not been able to achieve this objective despite the permanent allocation of funds in the endowment and loan fund (see Tables 21, 23, 25, 27, and 29). In fact, these funds have not been sufficient to keep pace with the growth of the institutional operations as indicated by the levels of the capital fund balance ratios.

Long-term (plant) debt to revenue ratio (long-term debt [plant] divided by fund revenues). Since the repayment of long-term debt affects the budget flexibility, the variations in this ratio will determine the extent to which the institutional revenues are committed to repay debts. Thus, increases in this ratio will indicate an increase in the amounts of resources to finance long-term debt, while decreases will indicate that resources will be available for other purposes (Dickmeyer & Hughes, 1982b; Minter et al., 1982).

The institutions as a group show a stable combined long-term (plant) debt to revenue ratio (see Table 32) that has remained unchanged since 1975. This means that the institutions have neither gained nor lost flexibility in their combined resources as related to the repayment of long-term debt.

The long-term (plant) debt to revenue ratio has remained relatively stable at The American University (see Table 33) and the Catholic University of America (Table 34), while Georgetown University and The George Washington University have gained considerable flexibility in their budgets. In 1973-74, The George Washington University had a long-term (plant) debt to revenue ratio of 0.6:1, which improved to 0.3:1 and has remained stable until 1983 (see Table 35). This means that The George Washington University had approximately 60 percent of its revenues committed to the repayment of debt in 1973-74, which decreased to around 30 percent and in turn increased the budget flexibility of the institution. Georgetown University also improved its budget flexibility between 1973-74 and 1982-83. This debt Long-term (plant) to revenue ratio was 0.5:1 in 1973-74--around 50 percent of the total revenues--and 0.3:1 in 1982-83--around 30 percent of the total revenues.

A common pattern detected by the long-term (plant) debt to revenue ratio is that the combined institutions as well as the individual institutions show relatively similar patterns of commitment of revenues to repayment of indebtedness--around 30 percent in the last three years--with the exception of Catholic University which shows a ratio of 0.2:1 in the last two years or about 20 percent of its total revenues.

Equity ratio. This ratio, which measures the degree of equity that the institutions hold in their assets (Minter & Bowen, 1978), shows that for the combined institutions equity remained at stable proportions until 1980-81, after which the degree of equity declined in 1981-82 and continued to decline in 1982-83. The level of this ratio for the combined institutions has remained lower than those of other aggregate private higher education institutions at the national level (see Table 15, p. 154). This decline in the equity ratio in the two fiscal years above indicated a relative deterioration in the capital base of the institution. According to the flow of funds (see Table 21) and indices of change (see Table 22), this decline is caused by the fact that the liabilities started to increase faster than the assets in 1980-81. The American University shows a relatively fluctuating slow decline in its degree of equity because according to the indices of change its total assets have increased slower than its total liabilities (see Tables 23 and 24). The Catholic University of America experienced a relatively stable increase in the degree of equity between 1973-74 and 1976-77, starting a relatively steady slow decline from 1977-78 through 1982-83, when the total assets began to grow more slowly than total liabilities (see Tables 25 and 26). Georgetown University has not experienced any change relatively in its degree of equity since the equity ratio has remained relatively stable (see Table 34). This is due to the total assets and total liabilities increasing relatively equally (see Tables 27 and 29). The degree of equity of The George Washington University experienced a relatively steady slow increase from 1973-74 through 1979-80, showing a relatively steady decline from 1980-81 to 1982-83 (see Table 35) due to an accelerated increase in the total liabilities that started to overcome the increase of total assets in 1981-82 (see Tables 29 and 30).

b. Effect of the major external factors on the financial condition of the institutions.

The major external factors to be considered in this analysis will be:

- Trends in enrollment in terms of FTE enrollment;
- Inflation as measured by the HEPI (1974 = 100); higher education inflation as measures by the HEPI (1974 = 100), family income by the Family Medium Income Index (1974 = 100), and the growth of the national economy as measured by the GNPIPDI.

Trends in enrollment. The full-time equivalent (FTE) enrollment of the institutions has remained relatively stable from 1976-77 to 1982-83, despite substantial increases in tuition and fees per student (see Tables 42, 44, and 46). Only the American University shows a decline in its enrollments of 10.1 percent between 1976-77 and 1982-83, a tuition increase of 93.6 percent during this same time period. As the sensitivity of enrollment to price increases in tuition and fees per student was measured, the enrollment sensitivity ratio determined that the changes in enrollments correlated slightly negatively with increased tuition and fees. This negative correlation was higher in 1982-83 at The American University than in all the other institutions participating in this study (see Table 45). With the exception of The George Washington University, this correlation was negative and inversely proportional to the individual and combined institutions between 1982 and 1983. This decline was determined by decreased enrollments in 1982-83 in relation to the previous year; however, in general terms, the stability of the enrollments has not been relatively affected by the substantially increased tuition

Table 42

Full-time Equivalent Student (FTE) Enrollment of American University, The Catholic University of America, Georgetown University, The George Washington University, and the Four Institutions Combined; Fiscal Years 1976 to 1983

	1 The American University		2 The Catholic University of America		3 Georgetown University		4 The George Washington University		5 Combined Institutions	
Fiscal Year	No.	Percentage of Change	No.	Percentage of Change	No.	Percentage of Change	No.	Percentage of Change	No.	Percentage of Change
1976-77	9,201	--	4,888	--	10,243	--	12,825	--	37,157	--
1977-78	9,088	-1.2	5,039	3.1	10,297	0.5	14,149	10.3	38,573	3.8
1978-79	8,795	-3.2	5,101	1.2	10,300	--	13,936	-1.5	38,132	-1.1
1979-80	8,985	2.2	5,235	2.6	10,546	2.4	15,176	8.9	39,942	4.7
1980-81	8,860	-1.4	5,252	0.3	10,501	-0.4	14,395	-5.1	39,008	-2.3
1981-82	8,805	-0.6	5,634	7.3	10,672	1.6	14,140	-1.8	39,251	0.6
1982-83	8,272	-6.1	5,269	-6.5	10,560	-1.0	14,311	1.2	38,412	-2.1

Note: The data in Column 1 are from the Office of Institutional Planning and Research of the American University; the data in Column 2 are from the Office of Planning and Institutional Research of the Catholic University of America; the data in Column 3 are from the Office of Institutional Research of Georgetown University; the data in Column 4 are from the Office of the Provost (Institutional Research Office) of The George Washington University; the data in Column 5 are the aggregate FTE enrollments of the four institutions.

Table 43

Trends in Full-time Equivalent (FTE) Enrollments
in Relation to Fall 1976-77 Enrollments

1976-77 = 100

	The American University	The Catholic University of America	Georgetown University	The George Washington University	Combined Institutions
Fiscal Year	Index	Index	Index	Index	Index
1976-77	100.0	100.0	100.0	100.0	100.0
1977-78	98.8	103.1	100.5	110.3	103.8
1978-79	95.5	104.4	100.6	108.7	102.6
1979-80	97.6	107.1	103.0	118.3	107.5
1980-81	96.3	107.4	102.5	112.2	105.0
1981-82	95.7	115.3	104.2	110.3	105.6
1982-83	89.9	107.8	103.1	111.6	103.4

Note: Indices calculated dividing the FTE enrollments of each year after 1976-77 by the FTE enrollment in 1976-77 and multiplied by 100. Formula adapted from: "Using Ratio Analysis to Evaluate Financial Performance" (p. 32), by J. Minter et al., 1982, San Francisco, Ca.: in C. Frances Successful Responses to Financial Difficulties, Jossey-Bass, Inc., Publishers.

Table 44

Tuition and Fees per Full-time Equivalent Student (FTE) in Current Dollars and Yearly Percentage of Change for The American University, The Catholic University of America, Georgetown University and The George Washington University, and the Four Institutions Combined; Fiscal Years 1976-77 to 1982-83

	1 The American University		2 The Catholic University of America		3 Georgetown University		4 The George Washington University		5 Combined Institutions	
Fiscal Year	Tuition and fee amount $	Percentage of change %	Tuition and fee amount $	Percentage of change %	Tuition and fee amount $	Percentage of change %	Tuition and fee amount $	Percentage of change %	Tuition and fee amount $	Percentage of change %
1976-77	3,012	--	3,515	--	3,704	--	2,927	--	3,240	--
1977-78	3,239	7.5	3,773	7.3	4,395	18.7	2,991	2.2	3,527	8.9
1978-79	3,727	15.4	4,102	8.7	5,040	14.7	3,409	14.0	3,568	1.2
1979-80	4,062	8.7	4,443	8.3	5,592	11.0	3,730	9.4	3,836	7.5
1980-81	4,973	22.4	5,010	12.8	6,361	13.8	4,335	16.8	5,124	33.6
1981-82	5,312	6.8	5,098	1.8	7,199	13.2	5,048	15.9	5,691	11.1
1982-83	5,831	9.8	6,063	18.9	8,238	14.4	5,651	11.9	6,458	13.5

Note: This table was elaborated dividing the total of tuition and fees of each and combined institutions (see Tables 16-20) by the total FTE enrollments of each and combined institutions (see Table 42) in each year.

Table 45

Sensitivity of Enrollment to Changes in Tuition Prices; The American University, The Catholic University of America, Georgetown University, The George Washington University, and Combined Institutions; Fiscal Years 1976-77 to 1982-83.

	The American University	The Catholic University of America	Georgetown University	The George Washington University	Combined Institutions
Fiscal Year	Coefficient	Coefficient	Coefficient	Coefficient	Coefficient
1976-77	--	--	--	--	--
1977-78	-0.2	0.4	--*	4.7	0.4
1978-79	-0.2	0.1	--*	-0.1	-0.9
1979-80	0.3	0.3	0.2	0.9	0.6
1980-81	-0.1	--*	--*	-0.3	-0.3
1981-82	-0.1	4.1	1.2	-0.1	0.1
1982-83	-0.6	-0.3	-0.1	0.1	-0.2

* Less than 0.05.

Note: Coefficients were calculated by dividing the percentages of change in enrollment (see Table 42) by the percentage of change of tuition and fees per student (see Table 44). Formula extrapolated from: "Financial Self Assessment: a Workbook for Colleges," by N. Dickmeyer and K. S. Hughes, 1982. National Association of College and University Business Officers (NACUBO)

Table 46

Trends in Tuition and Fees: The American University, The Catholic University of America, Georgetown University, The George Washington University, and Combined Institutions; Fiscal Years 1973-74 to 1982-83

Index Numbers: 1974 = 100

	The American University	The Catholic University of America	Georgetown University	The George Washington University	Combined Institutions
Fiscal Year	Index	Index	Index	Index	Index
1974	100.0	100.0	100.0	100.0	100.0
1975	114.3	107.9	111.3	106.8	110.0
1976	124.7	120.9	135.1	119.2	125.2
1977	128.1	133.6	153.1	123.1	134.1
1978	136.0	147.9	182.6	138.8	151.5
1979	151.8	162.7	209.4	155.8	170.6
1980	168.6	180.9	237.9	185.6	195.3
1981	203.6	204.7	269.5	205.6	222.6
1982	214.7	223.4	309.1	234.1	248.8
1983	222.8	248.5	350.9	265.2	276.3

Note: Tuition indices were calculated from the comparative statements of current fund revenues, expenditures, and other changes of the American University (Table 17), the Catholic University of America (Table 18), Georgetown University (Table 19), The George Washington University (Table 29), and the four institutions combined (Table 16). These indices were calculated by dividing the respective total tuition and fee amounts in each subsequent year by the total of tuition and fees in the base year (1974 = 100) and multiplying by 100.

prices. Yet, it seems difficult for the institutions to increase or at least maintain the enrollment size in relation to the tuition and fee prices.

Trends in Inflation. The revenue derived from tuition and fees of the institutions has more than kept pace with inflation with the exception of The Catholic University. This source of revenue has increased faster than the prices of the general economy, as measured by the CPI (1974 = 100), the prices of higher education goods and services as measured by the HEPI (1974 = 100), the growth of the national economy as measured by the GNPIPD (1974 = 100), tuition prices of private higher education at the national level as measured by the Private Higher Education Tuition Price Index (1974 = 100), and family income as measured by the Family Median Income Index. In 1982, the CPI was 201.9, the HEPI was 189.5, the GNPIPD was 184.8, the Private Higher Education Tuition Price Index was 211.1 (see Table 51), and the Family Median Income Index was 173.6 in 1982 (see Table 51). In 1982, this index was 214.7 at The American University, 223.4 at The Catholic Univeristy of America, 309.1 at Georgetown University, 234.1 at The George Washington University, and 248.8 for all the institutions combined (see Table 46).

A relevant factor in this trend in tuition and fee increases is its tendency to grow faster than the income of the families. This is a matter of concern because of the obvious relationship between enrollment and the ability of the students and their families to pay for tuition and fees.

Regarding the relationship between tuition and fees and expenditures per student, tuition and fees per student rose faster than the expenditures per student in terms of current dollars at The Catholic University of America, The George Washington University and the combined institutions. At Georgetown University and The American University, the expenditures per student rose faster than tuition and fees per student between 1977 and 1982 (see Tables 47, 48 and 49). The expenditures per student of the combined institutions in current dollars of the institutions rose by 68.1 percent while tuition and fees rose by 75.6 percent. At The American University the expenditures per student in current dollars increased by 88.7 percent while tuition and fees increased by 76.4 percent. The Catholic University of America increased its expenditures per student by 28.3 percent, and tuition and fees increased by 45.0 percent. Georgetown University experienced a growth in its expenditures per student of 104.8 percent while tuition and fees increased by 94.4 percent. At The George Washington University, the expenditures per student increased by 37.1 percent while tuition and fees underwent an increase of 72.5 percent (see Tables 48 and 49). Between 1976-77 and 1981-82, the CPI increased by 60.3 percent, the HEPI increased by 53.7 percent, the Gross National Product increased by 46.1 percent, the Private Higher Education Tuition Index rose by 67.5 percent, and the median family income increased by 39.9 percent (between 1977 and 1981) (see Table 51).

Table 47

Tuition and Fees per Student in Constant Dollars (1974 = 100): The American University, The Catholic University of America, Georgetown University, The George Washington University, and Combined Institutions; Fiscal Years 1976-77 to 1982-83

Fiscal Year	The American University	The Catholic University of America	Georgetown University	The George Washington University	Combined Institutions
1976-77	2,442	2,851	3,004	2,374	2,628
1977-78	2,463	2,869	3,342	2,274	2,682
1978-79	2,637	2,895	3,557	2,406	2,518
1979-80	2,611	2,855	3,593	2,397	2,465
1980-81	2,885	2,906	3,690	2,526	2,972
1981-82	2,803	2,690	3,799	2,664	3,003

Note: Data calculated dividing the tuition and fees per student in current dollars (see Table 44) by the HEPI (1974 = 100). The HEPI deflator base (1967 = 100) was changed to 1974 = 100 (see Table 51). The HEPI data were available until 1982.

In terms of constant dollars (1974 = 100), between the fiscal years 1977 to 1982 the combined institutions increased their tuition and fees by 14.3 percent while the expenditures per student increased by 9.4 percent. The American University increased its tuition and fees by 14.8 percent (see Table 48) while the expenditures per student increased by 22.8 percent. The Catholic University of America decreased its tuition and fees by 5.6 percent while the expenditures per student decreased by 16.5 percent. Georgetown University increased its tuition and fees by 26.5 percent while the expenditures per student increased by 52.8 percent. The George Washington University increased tuition and fees by 12.2 percent while expenditures per student decreased by 2.3 percent. With the exception of The American University, the student derived revenues of the individual and combined institutions have been able to keep pace with the expenditures per student (without the effect of inflation) and enrollment.

Regarding the internal inflation of the institutions, the combined institutions show that the educational and general revenues do not relatively keep pace with expenditures (see Table 52). Between 1973-74 and 1982-83, the educational and general expenditures rose faster than the educational and general revenues. The educational and general revenues increased by 159.8 percent while the educational and general expenditures increased by 171.1 percent, which was higher than the national inflation (see

Table 48

Trends in Tuition and Fees per Student in Current Dollars and Constant Dollars, (1974) = 100) American University, The Catholic University of America, Georgetown University, The George Washington University, and Combined Institutions; Fiscal Years 1977 to 1983.

Index Numbers, 1977 = 100

	The American University		The Catholic University of America		Georgetown University		The George Washington University		Combined Institutions	
Fiscal Year	Current dollars index	Constant dollars index	Current dollars index	Constant dollars index	Current dollars index	Constant dollars index	Current dollars index	Constant dollars index	Current dollars index	Constant dollars index
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	107.5	100.8	107.3	100.6	118.7	111.3	102.2	95.8	108.9	102.1
1979	124.1	108.0	116.7	101.5	136.1	118.4	116.5	101.3	110.1	95.8
1980	134.9	106.9	126.4	100.1	151.0	119.6	127.4	101.0	118.4	93.8
1981	165.1	118.1	142.5	101.9	171.7	122.8	148.8	106.4	158.5	113.1
1982	176.4	114.8	145.0	94.4	194.4	126.5	172.5	112.2	175.6	114.3
1983	193.6	--	172.5	--	222.4	--	193.1	--	199.3	--

Note: These data were obtained by dividing the amounts of tuition and fees per student in current (see Table 44) and constant dollars (see Table 47) (1974 = 100) in each year by the amounts in the fiscal year 1976-77.

Table 49

Expenditures per Student in Current Dollars, The American University, The Catholic University of America, Georgetown University, The George Washington University, and Combined Institutions; Fiscal Years 1976-77 to 1982-83

Index Numbers, 1976-77 = 100

	1 The American University		2 The Catholic University of America		3 Georgetown University		4 The George Washington University		5 Combined Institutions	
Fiscal Year	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index
1976-77	3,794	100.0	5,905	100.0	7,819	100.0	6,775	100.0	6,233	100.0
1977-78	4,046	106.6	5,985	101.4	8,635	110.4	6,559	96.8	6,466	103.7
1978-79	4,676	115.6	6,433	108.9	9,066	115.9	7,150	105.5	7,020	112.6
1979-80	5,319	113.8	7,026	119.0	12,219	156.3	7,209	106.4	8,101	130.0
1980-81	6,477	121.8	7,654	129.6	14,421	184.4	8,366	123.5	9,510	152.6
1981-82	7,159	188.7	7,576	128.3	16,010	204.8	9,289	137.1	10,477	168.1
1982-83	7,036	185.5	8,703	147.4	18,362	234.8	10,173	150.2	11,597	186.1

Note: Expenditures per student were calculated by dividing the educational and general expenditures plus mandatory transfers of each and combined institutions (see Tables 16-20) by the number of FTE students of each and combined institutions (see Table 42). The indices of change were obtained by dividing the amounts in each year by the amounts in the base year (1976-77 = 100)

Table 50

Expenditures per Student in Constant 1974 Dollars, (1974 = 100) The American University, The Catholic University of America, Georgetown University, The George Washington University, and Combined Institutions; Fiscal Years 1976-77 to 1981-82

1976-77 = 100

	1 The American University		2 The Catholic University of America		3 Georgetown University		4 The George Washington University		5 Combined Institutions	
Fiscal Year	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index
1976-77	3,077	100.0	4,789	100.0	6,341	100.0	5,494	100.0	5,055	100.0
1977-78	3,077	100.0	4,551	95.0	6,567	103.6	4,988	90.8	4,917	97.3
1978-79	3,300	107.2	4,540	94.8	6,398	100.9	5,046	91.8	4,954	98.0
1979-80	3,418	111.1	4,515	94.3	7,853	123.8	4,633	84.3	5,206	103.0
1980-81	3,756	122.1	4,440	92.7	8,365	131.9	4,853	88.3	5,516	109.1
1981-82	3,778	122.8	3,998	83.5	9,690	152.8	5,368	97.7	5,528	109.4

Note: Expenditures per student in constant dollars were calculated by dividing the expenditures per student in current dollars (see Table 49) by the HEPI value (see Table 51, Column 3) corresponding to each year. The indices of change were calculated by dividing the amounts in each year by the amount in the base year (1976-77 = 100).

Table 51 and 52). At The American University, the educational and general revenues rose faster than the educational and general expenditures; the educational and general revenues rose by 136.9 percent while the educational and general expenditures increased by 104 percent. At The Catholic University of America, the educational and general revenues rose faster than the educational and general expenditures; the educational and general revenues increased by 198.2 percent, while the educational and general expenditures increased by 93.7 percent. At Georgetown University the educational and general expenditures rose faster than the educational and general revenues; the educational and general expenditures rose 274.0 percent, while the educational and general revenues rose by 242.7 percent. At The George Washington University, the educational and general expenditures rose faster than the educational and general revenues; the educational and general expenditures increased by 145.3 percent, while the educational and general revenues increased by 115.2 percent.

Compared to the national inflationary trend, with the exception of The Catholic University, the internal inflation of the institutions of both the combined and individual institutions rose faster than external inflation between 1974 and 1982. This can be observed through the comparison of trends in educational and general expenditures of the institutions (see Table 52) with those of the inflation at the national level (see Table 50) as measured by the CPI and the HEPI. This inconsistency between revenues and expenditures of the institutions, and the high internal inflation is a major cause of the inconsistency between educational and general expenditures per student in constant dollars and the enrollment size. Expenditures per student (in constant dollars) should correlate negatively with change in enrollment.

c. Effect of the major administrative policies on the financial conditions of the institutions.

This section studies the major institutional resource allocation policies taking into consideration:

- Allocation of funds to capital reserve policies as measured by the capital fund balance ratio;
- Allocation of funds policies to educational and general expenses, i.e., instruction, research, public service, institutional support and operations, and maintenance of plant; and
- Efforts to minimize risk exposure as measured by the long-term (plant) debt to revenue ratio.

Allocation of funds to capital reserve policies. This ratio, already analyzed in reference to financial condition (see capital fund balance ratio, pp. 272-274), shows that the institutions are unable to accumulate adequate reserves to contribute to the capital funds, i.e., the endowment and loan funds in the analysis of this ratio, which have remained at a relatively steady lower level for the combined and individual institutions. According to the analysis of

Table 51

Trends in Prices of the General Economy (CPI): Higher Education Prices of Goods and Services (HEPI), Growth of the Economy, (GNPIPD), Private Higher Education Tuition, Family Median Income; Fiscal Years 1974 to 1982

Index Numbers: 1974 = 100

1 Fiscal Year	2 CPI	3 HEPI	4 GNP IPD	5 Private higher education tuition	6 Family median income
	Index	Index	Index	Index	Index
1974	100.0	100.0	100.0	100.0	100.0
1975	111.2	108.6	110.7	106.5	106.3
1976	119.0	115.7	118.5	115.9	116.0
1977	125.9	123.3	126.5	126.1	124.1
1978	134.4	131.5	135.2	136.6	136.8
1979	147.0	141.7	145.9	148.0	152.4
1980	166.6	155.6	159.4	161.6	163.0
1981	185.8	172.4	174.3	182.5	173.6
1982	201.9	189.5	184.8	211.2	--
1983	--	--	192.6	--	--

Note: The indices in Columns 2, 3, 5, and 6 exhibit the indices adjusted at 1974 prices (see Table 4, Chapter II, p. 48) using the data from Inflation Measures for Schools and Colleges, (pp. 103-104), by D. K. Halstead, 1983, USA: The National Institute of Education. The data in column 4 were adapted from Table 3 (Chapter II, p. 46). CPI: Consumer Price Index; HEPI: Higher Education Price Index; GNPIPD: Gross National Product Implicit Price Deflator.

Table 52

Trends in Educational and General Revenues, and Educational and General Expenditures in Current Dollars; The American University, The Catholic University of America, Georgetown University, The George Washington University, and Combined Institutions, (in $000)

Index Numbers, 1973-74 = 100

	The American University		The Catholic University of America		Georgetown University		The George Washington University		Combined Institutions	
Fiscal Year	E&G revenues	E&G Expen-ditures	E&G revenues	E&G Expen-ditures	E&G revenues	E&G Expen-ditures	E&G revenues	E&G Expen-ditures	E&G revenues	E&G Expen-ditures
	Index	Index	Index	Index	Index	Index	Index	Index	Index	Index
1973-74	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1974-75	125.9	106.5	106.1	105.8	118.6	117.0	108.7	113.4	114.4	112.4
1975-76	135.5	118.3	112.7	110.6	138.0	132.2	120.8	130.4	127.6	125.9
1976-77	138.4	124.1	120.4	118.4	158.9	154.5	129.0	146.4	139.1	140.9
1977-78	148.7	130.6	128.3	123.7	176.4	171.5	139.4	156.3	151.5	151.8
1978-79	169.3	145.6	137.7	134.6	188.1	180.1	147.5	167.9	163.0	162.9
1979-80	195.2	167.8	157.9	150.8	222.1	248.5	168.4	184.3	188.9	196.9
1980-81	223.9	202.3	167.8	173.9	265.4	292.1	161.1	202.9	214.0	225.7
1981-82	240.9	221.5	196.2	185.9	300.4	329.6	197.7	221.3	238.5	250.2
1982-83	236.9	204.3	208.2	193.7	342.7	374.0	215.2	245.3	259.8	271.1

Note: Indices calculated with the data in Tables 16-20, dividing the dollar amounts of Educational and General (E&G) revenues and Educational and General (E&G) expenditures in each year by the respective amounts of Educational and General (E&G) revenues and Educational and General (E&G) expenditures in the base year (1973-74 = 100) and multiplied by 100.

this ratio, the institutional policies have not been able to keep the pace that should exist between the growth of the institutions operations (increase of the current fund expenditures) and the increase of capital reserves not expendable for the day-to-day operations and that are potential providers of future revenues for the institutions (see Tables 32-36). In general, the institutions do not show signs of decline in total fund balances; however, the permanent use of short-term credit and the trend of the current liabilities to rise faster than the current assets revealed signs of financial constraint (see Tables 21-30). These factors define observed trends in the current and liquidity ratios (see pp. 254-272). The use of interfund borrowing has permitted the use of financial reserves among funds without deteriorating the structure of the fund balances of the current, endowment, and loan fund groups (see Table 31).

Policies for allocation of funds to educational and general expenditures. For the evaluation of the effect of administrative policies on the expenditure patterns of the institution, the following revenue allocation ratios are employed: revenue allocation for instruction, revenue allocation for research revenue, allocation for public service, revenue allocation for institutional support, and revenue allocation for operation and maintenance of plant.

Revenue allocation for instruction (instructional expenditures divided by educational and general revenues).

This ratio, which measures the relationship between the expenditure patterns for instruction and the educational and general revenues of the institutions, shows that the combined institutions (see Table 32) and the individual institutions (see Tables 33-36) experienced a relatively steady slow decline in the emphasis on allocation of funds to the most related function--the education of students--with the exception of The George Washington University, which shows a relatively steady slow increase (see Table 36). This may be an indicator of reduced emphasis on educational activities, such as credit and noncredit courses, academic, vocational, and technical instruction, remedial and tutorial instruction, and other expenditures related to the instruction of students.

Revenue allocation for research (research related expenditures divided by educational and general revenues). This ratio measures the emphasis of the institutions on research activities. The ratio indicates a steady slow increase for the combined institutions (see Table 32) and at The American University the ratio shows a relative fluctuation with a tendency to decline (see Table 33); at The Catholic University the ratio has remained relatively stable (see Table 34); at Georgetown University it has remained relatively stable showing a tendency to decline slowly (see Table 35); at The George Washington University it shows a steady decline since 1974 (see Table 36). Because the funds allocated to research in many cases depend on decisions of external agencies (i.e., sponsored programs related to research), this ratio may not properly evaluate the attitude of the internal administration toward research activities; however, it is an indicator of the relevance given to the activities within the institutions.

Revenue allocation for public service (public service expenditures divided by educational and general revenues). The function of public service is only carried as such in the financial structure of The American University and The Catholic University of America, requiring a relatively insignificant portion of the budget of those institutions. This ratio has remained relatively stable at lower levels, which indicates a reduced emphasis on public service activities, such as community service, cooperative extension service, and public broadcasting services (see Tables 32-34).

Revenue allocation for institutional support (institutional support expenditures divided by educational and general revenues). This ratio measures the proportion of educational and general revenues required to finance administrative expenses of any kind, such as those related to the governing board, business officers, administrative staff, logistical activities, and staff support services not operated as auxiliary enterprises, community and alumni relations, and other similar expenditures.

For the combined institutions, the revenue allocation ratio for institutional support has experienced a substantial relatively steady growth, occupying a major portion in the combined expenditure structure of the institutions (see Table 33). At The American University this ratio has remained steady with a relatively high proportion after a substantial increase between 1973 and 1975 (see Table 33). At The Catholic University of America, this ratio has remained relatively stable, occupying a significant proportion of the institution's budget (see Table 34). Georgetown University, after having maintained a relatively stable low proportion of expenditures for institutional support between 1973-74 and 1978-79, experienced a substantial increase in 1979-80, remaining stable until 1982-83 (see Table 35). At The George Washington University, the ratio of allocation of funds to institutional support indicates a substantial, relatively steady growth in the institutional support expenditures (see Table 36).

This trend, is in keeping with higher proportions of institutional support expenditures and is a matter of concern because the more resources that are allocated for this type of expenditure the less resources can be used for the institutional missions of instruction, research, and public services, not to mention the reinforcement of the capital structure of the institutions.

Revenue allocation for operation and maintenance of plant (operation and maintenance of plant expenditures divided by educational and general revenues). This ratio, which measures the allocation of funds for administration, maintenance, and protection of buildings and grounds, and other selected expenditures, remained relatively stable for the combined institutions between the fiscal years 1973-74 and 1978-79; experiencing a substantial increase in 1980, and remaining stable until 1982-83 (see Table 32). At The American University, this ratio remained relatively stable showing a slow steady decrease after the fiscal year 1979-80 (see Table 33). At The Catholic University, this ratio has remained relatively stable (see Table 34). At Georgetown University this ratio experienced a steady slow increase between 1973-74 and 1978-79, experiencing a substantial increase in 1979-80 with a trend to decrease relatively slowly (see Table 35). At The George Washington University, this ratio indicates a relatively steady slow increase in the operation and maintenance of plant expenditures during the 10-year period (see Table 36). These institutions with growing operational and maintenance of plant expenditures have the same problem as that related to the growth in institutional support expenditures. These kinds of expenditures absorb resources that could be used to finance the operations related to instruction, research, and public service and used to increase the capital funds of the institutions, i.e., endowment and loan funds. This relative loss of flexibility caused by increased expenditures in institutional support and operation and maintenance of plant contribute to an increase of the institutional financial risk, unless the educational and general revenues keep pace with these types of resource outflows.

d. Change in the financial risk position of the institutions.

The change in the financial risk position of the institutions will be evaluated by analysis of the institutional ability to gain financial flexibility, i.e, the ability to adapt to changes in financial resource flow. Thus, a decline in flexibility will cause an increase in the risk position of the institution. This change in the risk position will be determined by:

- Analysis of the revenue structure;
- Effect of the long-term debt; and
- Capital fund investment.

Analysis of the revenue structure. The analysis of the revenue structure (Question 1a) detected that the sources of revenue maintain relatively unstable proportions due to the declining trend in the proportion of contribution of the Federal government, private philanthropy, and the inability of the endowment revenues to compensate for these declines. Declines cause the institutions to increase their dependence on tuition revenues, especially in the case of those institutions not operating hospitals (The American University and The Catholic University of America) (see Tables 16-20), while the hospital operating institutions (The George Washington University and Georgetown University) show a substantial portion of revenues derived from hospital operations. This instability of the sources of revenue undermines the flexibility of the institutions. This can be observed when this instability is related to the growing expenditures in institutional support and operation and maintenance of plant (see revenue allocation ratios for institutional support and operation and maintenance of plant). The growth in these types of expenditures reduced the possibility of resource allocation to the institutions' primary purposes, i.e., instruction, research, and public service.

Effect of long-term debt. According to the already analyzed long-term (plant) debt-to-revenue ratio, this ratio decreased for the combined and individual institutions (see Tables 32-36). The decrease in this ratio indicates that the institutions have reduced their institutional financial risk due to the minimization of the proportion of revenues committed to the repayment of indebtedness. Therefore, the institutions have gained financial flexibility.

Capital fund balance investment. The endowment and loan funds have not showed growth in proportions that can generate a solid capital base to the institutions. As indicated by the capital fund balance ratio, Georgetown University and The American University showed a decline in this ratio, while The Catholic University of America and The George Washington University maintained stable ratios without showing signs of deterioration. The combined institutions showed a stable trend in this ratio (see capital fund balance ratios). This is an indication that the institutions with declining ratios have lost flexibility in their investments according to the increased size of the operations, and the institutions with stable ratios have not increased their flexibility. From this point of view, the institutions have not minimized their exposure to financial risk because of a lack of a solid capital base, and given the relative steady decline in the proportion of contributions of the Federal government and private philanthropy (see Tables 33-36, Contributions of the Federal Government and Contributions of Private Philanthropy Ratios and Capital Fund Balance Ratio), this exposure to risk is more pronounced.

The analysis of the contribution of the endowment income ratio leads to the conclusion that the resources provided by endowments have not improved relatively (see Tables 33-36, Contribution of Endowment Income Ratio). The insufficiency in the source of revenues are relatively compensated for by the balancing effect of tuition and fees (see Tables 33-36, Contribution of Tuition and Fees Ratio) and other incidental sources of revenue (see Contribution of Sales and Services of Educational Activities, Tables 33-35).

e. Changes in nonfinancial resources that may have caused variations in the institutions' financial resources.

Nonfinancial resources, such as enrollment size, are factors that determine budgeting decisions about the amounts allocated to institutions. The revenue allocation for instruction ratio, because of its declining trend, indicates a relative reduction in the emphasis on the universities' primary mission of educating students (see Tables 32-36, Revenue Allocation for Instruction Ratio), as was pointed out in the section on changes in the risk position. The expenditures per student in constant dollars reflect this relationship to enrollments without the influence of inflation (see Table 48). It was observed that even when the enrollments remained relatively stable, the expenditures per student have a tendency to continue to increase; thus, this indicates that the decrease in revenue allocation for instruction is not determined by the size in enrollments, but by the increases of expenditures other than for instruction, research, and public service, e.g., operation and maintenance of plant and institutional support (see Revenue Allocation for Instruction and Revenue Allocation for Institutional Support, Tables 32-36).

Table 53 shows that full-time-equivalent faculty members show a relatively increasing trend in the combined institutions and individual institutions. The FTE student to FTE faculty ratio indicates a relative stability in the relations of FTE student to FTE faculty ratio (see Table 54). Thus, the reduction in the proportion of instruction cannot be attributed to faculty budget reductions, and proves a better explanation for the increase in the expenditures per FTE student and the internal inflation of the institutions. Therefore, the declines in the allocation ratio for instruction is not attributed to a reduced emphasis on instruction but to the increase in expenditures other than instruction, such as institutional support and operation and maintenance of plant.

f. Overall financial condition of the institutions.

This section summarizes the major findings related to the financial conditions of the aggregate individual institutions.

Combined institutions. The aggregated institutions participating in this research show a stable liquidity condition for the fulfillment of the current obligations (short-term credit) as measured by the liquidity ratio and current ratios; however, the persistent use of short-term credit and internal loans and the trend of the total liabilities to grow faster than the total assets are symptoms of financial stress. This use of short-term credit and interfund loans has contributed to the avoidance of the deterioration of the capital base of the aggregate of institutions. Thus, decreased assets as source funds are relatively nonexistent.

The accumulation of funds in the capital funds of the institutions has not been sufficient to provide a strong capital base. The growth of the endowment and loan fund, as measured by the capital fund balance ratio, does not show signs of improvement according to the increasing size of the operational expenditures. The long-term (Plant) debt to revenue ratio indicates the aggregate institutions have

Table 53

Full-time Equivalent Faculty (FTE) of The American University, The Catholic University of America, Georgetown University, The George Washington University, and the Four Institutions Combined; Fiscal Years 1976-77 to 1982-83

Index Numbers: 1973-74 = 100

	1 The American University		2 The Catholic University of America		3 Georgetown University		4 The George Washington University		5 Combined Institutions	
Fiscal Year	No.	Index	No.	Index	No.	Index	No.	Index	No.	Index
1973-74	502	100.0	--	--	836	100.0	1,080	100.0	2,418	100.0
1974-75	523	104.2	--	--	887	106.1	1,149	106.4	2,559	105.8
1975-76	547	109.0	--	--	914	109.7	1,225	113.4	2,686	111.1
1976-77	598	119.1	--	--	938	112.2	1,277	118.2	2,813	116.3
1977-78	499	99.4	433	100.0	956	114.4	1,273	117.9	2,728	112.8
1978-79	551	109.8	--	--	999	119.5	1,329	123.1	2,879	119.1
1979-80	561	111.8	401	92.6	1,020	122.0	1,359	125.8	2,940	121.6
1980-81	571	113.7	--	--	1,031	123.3	1,408	130.4	3,010	124.5
1981-82	586	116.7	460	106.2	1,057	126.4	1,417	131.2	3,060	126.6
1982-83	551	109/8	--	--	1,104	132.1	1,443	133.6	3,098	128.1

Note: The data in Column 1 are from The American University Office of Institutional Planning and Research; the data in Column 2 are from the Catholic University of America's Office of Institutional Planning and Research; the data in Column 3 are from Georgetown University Office of Institutional Research; the data in Column 4 are from the Office of the Provost (Institutional Research) of The George Washington University. The Catholic University of America is not included in the combined institutions because of insufficient data.

Table 54

Full-time Equivalent (FTE) Ratio: The American University, The Catholic University of America, Georgetown University, The George Washington University, and Combined Institutions; Fiscal Years 1976-77 to 1982-83

	The American University	The Catholic University of America	Georgetown University	The George Washington University	Combined Institutions
Fiscal Year	Ratio	Ratio	Ratio	Ratio	Ratio
1976-77	15.4	--	10.9	10.0	13.2
1977-78	18.2	11.6	10.8	11.1	14.1
1978-79	16.0	--	10.3	10.5	13.2
1979-80	16.0	13.0	10.3	11.2	13.6
1980-81	15.5	--	10.2	10.2	13.0
1981-82	15.0	12.2	10.1	10.0	12.8
1982-83	15.0	--	9.6	9.9	12.4

Note: Ratios calculated by dividing the full-time equivalent (FTE) enrollment (see Table 42) by the full-time equivalent faculty (see Table 53) in each year. The data of the Catholic University of America are excluded from the combined ratio due to the reporting of incomplete information on FTE faculty.

reduced the commitment of revenue to the repayment of long-term debt, thus increasing the flexibility in the management of such revenues. However, the declining equity ratio reveals that the aggregate of institutions shows a tendency to lose equity in assets because the total liabilities are growing faster than the total assets and fund balances and, therefore, are deteriorating the capital base of the combined institutions.

The internal inflation of the aggregate of institutions is higher than that at the national level; however, the increase in tuition and fees more than kept pace with this inflationary trend with enrollment, and with the growth in the expenditure per student, both in current and constant 1974 dollars. Growth in the expenditures per student is related to the relatively growing faculty size in relation to enrollment, which indicates an increasing emphasis on instructional activities. Given the relative stability of the student-to-faculty ratio, faculty size has more than kept pace with enrollment size. The educational and general revenues rose more slowly than the educational and general expenditures as a consequence of this internal inflation of the institutions. This may be associated with the steady increase in faculty size and the growing expenditure for institutional support and operation and maintenance of plant.

The examination of the administrative policies reveals a failure to construct a solid capital fund base (endowment and loan funds) as expressed by the steady lower levels of the capital fund balance ratio. These ratios should increase as the size of the operations increase. The allocation of funds to instruction did not keep pace with the growth of the institutional revenue; however, the emphasis on instruction persists, given the steady increase in faculty size in relation to the steady level of enrollments and in the growing expenditures per student in current and constant dollars. These are symptoms of difficulties in controlling growth of the expenditures for institutional support and operation and maintenance of plant. These expenditures have increased faster than those related to research, instruction and public service, thus, reducing the flexibility for allocation of resources to capital funds, and for the expansion of the institution services to the university community and public in general. The allocation of expenditures for research shows a relatively fluctuating trend with a tendency to decline, while the expenditures for the function of public service showed a trend to remain stable at relatively reduced levels.

The institutions as a group reduced their financial risk from the point of view of revenue committed to the repayment of indebtedness as measured by the long-term (plant) debt to revenue ratio. However, the risk exposure continues given the relative stagnation of the endowment and loan funds, the relative steady increase in the total liabilities, and the trends in educationa and general expenditures to rise faster than the educational and general revenues.

The trends in nonfinancial resources--i.e., faculty increases and the relative stability of enrollments--have contributed to the internal inflation of the combined institutions, and to the growing expenditures per student. Nevertheless, as compared to the total revenues, the allocation of funds to instruction does not keep pace with the growth of the total educational and general revenues as measured by the revenue allocation ratio to instruction. Other contributors to the reduction in the institutions' financial flexibility and internal inflation are the growing proportion of the expenditures for operation and maintenance of plant and institutional support. Accordingly, the overall condition of the combined institutions shows neither a deteriorated nor an improved condition; however, they do show a relatively high exposure to risk due to the lack of a solid capital base (deficient capital fund balance and declining equity) and to the difficulties of controlling the internal institutional inflation.

The American University. The American University exhibits liquidity problems as measured by the liquidity ratios, and a trend in the current assets to grow more slowly than the current liabilities over the last two years. The frequent use of short-term credit indicates that this is a usual mechanism to cover cash deficiency for the financing of short-term operations. As in the case of the combined institutions, decreased assets are not a source of funds at The American University, and interfund loans are not a common practice. This may be determined by the lack of liquidity in the institutional funds; external short-term loans must be used instead. The capital fund balance of The American University shows signs of deterioration as measured by the capital fund balance ratio, while the long-term (plant) debt to revenue ratio indicates a reduced commitment of revenues to repayment of indebtedness, therefore, increasing its flexibility in the management of the financial resources. Because the total liabilities have increased faster than the total assets, The American University exhibits a relative decline in its degree of equity in assets, which is a sign of deteriorating financial conditions.

Similar to the combined institutions, The American University exhibits an internal inflation higher than that of the national level; however, the educational and general revenues have kept pace with the educational and general expenditures while the increase in revenues per student has not kept pace with the growth in expenditures per student. Faculty size has remained relatively stable in relation to declining enrollments. This is a factor in increased expenditures per student, while the expenditures for institutional support and operation and maintenance of plant have remained relatively steady as related to the increase in the educational and general revenues.

The examination of the administrative policies reveals that the attempt to build up a solid capital fund balance (endowment and fund balances) does not keep pace with the growth of the institutional operations as measured by the capital fund balance ratio. The allocation of funds to instructional expenditures does not keep pace with the growth of the institutional revenues; however, faculty size has not been reduced as a consequence of declining enrollments but has remained fluctuating without affecting class size. The growing expenditures per student in current and constant dollars may be associated with the relationship between declining enrollment and faculty size and the steady budget proportions for institutional support and operation and maintenance of plant. The allocations of funds for research and public service have remained relatively stable, as indicated by the revenue allocation ratios for research and public service.

The American University kept a relatively steady risk position as measured by the long-term (plant) debt to revenue ratio, so the institution has neither gained nor lost flexibility in the management of revenues as related to the repayment of indebtedness.

Accordingly, The American University shows a relatively deteriorating risky financial condition because of its relatively increasing dependence on tuition resources and declining enrollments, lack of a solid capital fund balance and declining equity, as well as its inability to increase the flexibility in the management of its institutional resources. The declining trend in Federal government and private philanthropy contributions, and the relative stability of the contributions of endowment income, and the high internal inflation are factors that tend to undermine the financial condition of The American University (see Financial Performance Ratios; see also Table 33).

The Catholic University of America. This institution shows a substantially improved liquidity as measured by the current and liquidity ratios. The trend shows the current assets have grown faster than the current liabilities; however, the increase in the use of short-term credits between 1981 and 1983 constitutes an indication of relative increased financial stress. Decreased assets are not relatively a source of funds for The Catholic University; however, the current fund experienced a decline in 1982-83 as a consequence of the increase in the current liabilities higher than that in the current assets. In common with The American University, interfund loans are not a common practice at The Catholic University of America; thus, external loans may satisfy a possible scarcity of liquidity in the internal funds.

The capital fund balance (endowment and loan fund) of The Catholic University as measured by the capital fund balance ratio, after a decline in the fiscal year 1979-80, remained relatively stable. Thus, the endowment and loan fund balances have not increased at the pace of operational growth. The long-term (plant) debt to revenue ratio indicates a gain in flexibility because of the decrease in the commitment of revenues to the repayment of indebtedness. The total liabilities of The Catholic University grew faster than the total assets of the institution, causing declining equity in the assets as measured by the equity ratio, which was a common pattern for the institutions in this study.

The growth in the internal inflation of The Catholic University of America is the lowest in the group, but relatively equal to the national inflation between 1974 and 1982, compared to the HEPI, and lower as compared to the CPI. The total of the educational and general revenues kept pace with the total educational and general expenditures, and tuition and fees per student more than kept pace with the expenditures per student and enrollment in current and constant dollars. The total of tuition and fees rose faster than the total of educational and general revenues and expenditures. The educational and general expenditures per student experienced a relative decrease in comparison to a relatively stable size of enrollments between 1976 and 1982. Despite the insufficiency of the data related to faculty, the increase in FTE faculty numbers in 1972 in relation to 1978 is associated with an increase in enrollment to a slight increase in class size between these two dates (see Tables 42, 53, and 54); however, the insufficiency of data did not allow for further analysis.

The examination of the administrative policy of The Catholic University of America shows a relative stability in the capital fund balance ratio. The allocation of funds to this investment has not been sufficiently effective to produce an increase in the proportion of this investment at the pace of the operational size increase. However, the increase of financial flexibility indicated by the long-term (plant) debt to revenue ratio is a sign of the improved financial condition. The allocation of funds to instruction as measured by the revenue allocation for instruction reveals an increase in the flexibility of the management of the income that can be allocated to instructional activities, while a relative reduction of faculty members (in 1982 as compared to 1978) was not detected. The revenue allocation ratios for institutional support and operation and maintenance of plant reflects a stable expenditure pattern for the types of outflows as related to the growth in the educational and general expenditures. In this sense, the management of resources has neither gained nor lost flexibility. The allocation of funds for research and public service shows a tendency to remain stable as measured by the revenue allocation ratios for instruction and public service, respectively.

The decrease in the long-term (plant) debt to revenue ratio indicates that The Catholic University of America has gained flexibility in the management of its institutional resources and consequently decreased its exposure to financial risk.

Accordingly, The Catholic University shows a relatively stable financial condition with no signs of relative deterioration nor being affected by the internal inflation that affects the other institutions. However, the deficiency in the accumulation of capital reserves, especially in the endowment and loan funds (capital funds), the relative persistence of short-term credit, and the steady declining trend in the equity in the institutional assets are symptoms of relative financial decline and, like all types of independent institutions, will be very sensitive to any eventual decline in the level of enrollment.

Georgetown University. Georgetown University experienced a relative improvement in its liquidity after 1978 different from the other universities, as indicated by the current and liquidity ratios. The total assets of Georgetown University rose equally to the liabilities; thus, the equity on the assets remained relatively intact as reflected by the equity ratio (total assets to total liabilities) during the 10-year period. Interfund loans are a common practice at Georgetown University. This may be justified by the increasing interest rates to be paid on external loans and the liquidity available in other funds different from the current fund. Short-term credit is a common source of funds for this institution and, as in the case of the other institutions of the group, relative decreases in assets and fund balances are not a common source of funds; however, the flow of funds of Georgetown University showed a decrease in the endowment assets and fund balances between fiscal years 1973-74 and 1978-79 as well as in the current fund assets and fund balances.

Although the capital fund balance of Georgetown University does not show signs of further deterioration (after a decline between 1973 and 1976), as measured by the capital fund balance ratio, these funds have not been able to keep pace with the institutional operations. The relatively steady decrease of the long-term (plant) debt to revenue ratio indicates that Georgetown University has increased the flexibility in the management of its revenue sources because of a decrease in the proportion of the institutional revenues committed to the repayment of indebtedness. Therefore, the institution has reduced its financial risk. As previously noted, Georgetown University has not decreased its degree of equity on its assets, which is an indication of a stable financial condition and financial risk position.

The examination of the administrative policy of Georgetown University through the already mentioned decrease in financial risk position and the stability in the equity of the institutional assets, reflects a relative increase in efficiency in the administrative policies. However, the allocation of funds to the capital funds (endowment and loan fund) has not been sufficient (see Capital Fund Balance Ratio) to improve the capital base of the institution. The allocation of funds to instruction (see performance ratios, Table 35) indicates a decline in the expenditures for instruction in relation to the growth of the revenue. This indicates that the allocation of expenditures for instruction has not kept pace with the growth in the institution's educational and general revenues. Also, the revenue allocation ratios for operation and maintenance of plant and institutional support reflect difficulties in controlling the relatively steady growth of these types of general expenditures.

The internal inflation of Georgetown University is the highest within the group and higher than inflation at the national level as measured by the HEPI and CPI (see Tables 51 and 52). The educational and general revenues did not keep pace with the educational and general expenditures (between 1973 and 1983) and the tuition and fees per student did not keep pace with the educational and general expenditures per student and enrollment in current and constant 1974 dollars. This is determined by the steady increase in FTE faculty as related to the trends in FTE enrollment without a relative alteration in the class size as measured by the FTE ratio (see Table 54) and the growing trend in other educational and general expenditures per student, such as operation and maintenance of plant.

In accordance with the above description, Georgetown University shows a financial condition threatened by a greatly increasing internal inflationary trend and is not well supported by a solid capital base, especially in relation to the pace between the capital funds and the substantial steady growth of the operating size. The growing expenditures per student that are growing faster than tuition, the decline in support of the Federal government, private philanthropy, and the inability of endowment income to compensate these contribution declines--all tend to increase the institutional exposure to financial risk. Thus, incidental sources of revenue, such as sales and services of educational activities, which show a substantial steady increase, partly compensate for this decline (see Performance Ratios, Table 35). Although auxiliary enterprise and hospital operations have proven to more than break even, the sources of revenue produced from these activities are not a usual source of funds for the financing of educational and general expenditures because of the self-financing character of such activities. Thus, the financial condition of Georgetown University is relatively risky, and susceptible to declines in enrollments if the inflationary trends continue and the capital base is not reinforced.

The George Washington University. The George Washington University shows a relatively stable trend in liquidity conditions, although the current ratio shows a relative steady decline between the fiscal years 1973-74 and 1982-83. The equity ratio indicates that the institution reduced equity in its assets (after an increase between 1973-74 and 1979-80) between 1980-81 and 1982-83, when the total liabilities started to grow faster than the assets. This constitutes a sign of relative decline and increased financial exposure to risk. As in the case of Georgetown University, interfund loans are a common practice at The George Washington University due to the growing interest rates on external loans and relative availability of internal source of funds. However, this mechanism is usually complemented with external short-term loans, which is a symptom of short-term financial stress.

The relative decreases in assets--as in the case of the institutions previously described, analyzed, and evaluated--are not a common source of funds for the institutions; however, in the fiscal year 1981-82 a decrease in the plant assets and fund balance reflects funds provided by the liquidation of assets from the plant fund associated with the faster increase in the liabilities, since this fiscal year constitutes an indication of financial pressure. Nevertheless, the capital fund balance (endowment and fund balances) as expressed by the capital fund increased in 1981-82 and remained stable until 1982-83. This increase in the capital fund balance, however, does not provide a strong capital fund structure when compared to the rest of the institutions, but the contribution of endowment income and similar investments was relatively improved between the fiscal years 1981-82 and 1982-83, as measured by the endowment income contribution ratios.

The long-erm (plant) debt to revenue ratio indicates that the institution has gained flexibility in the management of its revenue sources and decreased its exposure to risk; however, the decline in equity since 1980-81 indicates a relative decrease in long-term flexibility and increased exposure to long-term risk.

As for the examination of administrative policies in relation to resource allocation, it was mentioned previously that the injection of resources to the capital funds had increased the proportions of endowment and loan funds as related to the institutional operation size; however, this level hardly equals those of the other institutions between the fiscal years 1981-82 and 1982-83. As measured by the revenue allocation ratio for instruction, the expenditures for instruction have kept pace with the increase in the educational and general revenues (see Performance Ratios, Table 36). However, the expenditures for operation and maintenance of plant have also experienced an increase as measured by their respective financial ratios. Thus, this reveals some difficulties in controlling these kinds of expenditures. The internal inflation at The George Washington University, as in the case of The Catholic University of America, was lower than the external inflation as measured by the CPI and the HEPI (see Tables 51 and 52).

As in the other institutions (the exception being The Catholic University of America), the internal inflation of The George Washington University was higher than that at the national level. However, like Georgetown University, the educational and general expenditures rose faster than the educational and general revenues. However, tuition and fees per student rose faster than the expenditures per student, which were lower than the rate of inflation between the fiscal years 1973-74 and 1981-82. Thus, tuition and fees per student more than kept pace with enrollment and expenditures per student. The relationship of FTE enrollment to FTE faculty does not indicate a loss in the emphasis on instruction expenditures nor alterations in class size. The faculty size showed a steady increase and kept pace with the size of enrollment, as indicated by the FTE student to FTE faculty ratio. Thus, the increased expenditures per student and the previously mentioned increase in operation and maintenance of plant and institutional support are factors that contributed to this high inflation at The George Washington University.

According to the above description, The George Washington University shows a financial condition threatened by a growing inflationary trend. Even when the institution was gaining flexibility through a reduced commitment of revenues to long-term debt, the relative loss of equity on the total assets is a sign of deterioration. The inability to control the expenditures for operation and maintenance of plant, the inability of the capital funds to keep pace with the size of the operation, and the short-term financial pressures generated by increasing short-term liabilities, are symptoms of a risky financial condition. Thus, as in the case of the other institutions, this financial condition of the institution will be sensitive to decline in enrollments and the growing inflationary trend. Even when hospital and auxiliary enterprise operations have proven more than break even, these sources of revenues are not usually committed to cover educational and general expenditures, due to the self-financing character of these activities (see Performance Ratios, Table 36).

3. Financial Performance

This section is devoted to the factors underlying financial conditions of the individual and combined institutions considering: the contribution of the various sources of revenue to the financing of the educational and general expenditures of institutions, the major administrative policies for resource allocation to expenditures, and the ability of the institutions to financially survive according to the balance between the revenues and expenditures, and the overall financial performance of the institutions.

Contribution of the various sources of revenues.

To determine the contribution of the various sources of revenue, the following financial performance ratios have been selected:

- Contribution of tuition and fees;
- Contribution of Federal government;
- Contribution of private philanthropy;
- Contribution of endowment income; and
- Contribution of sales and services of educational activities.

Contribution of tuition and fees. The ratio of the contribution of tuition and fees will be measured by dividing the total of tuition and fees by the total educational expenditures plus mandatory transfers.

The combined institutions present a relatively steady ratio of the contribution of tuition and fees (see Table 32).

The American University, as a typical tuition-dependent institution, shows that most of its educational and general revenues are derived from this source of revenue. The ratio of contribution indicates a relative stability in this source of revenue showing a relatively substantial increase in the fiscal year 1982-83 (see Table 33).

The Catholic University of America shows that the contribution of tuition and fees to the financing of the educational activities experienced a relatively steady increase between 1973-74 and 1982. This is an indication of increased dependence on tuition revenues (see Table 34).

Georgetown University shows a relative fluctuating trend in the contribution of tuition and fees, with a tendency to remain relatively stable (see Table 35). At The George Washington University, the contribution of tuition and fees experienced a decline between the fiscal years 1973-74 and 1976-77, experiencing a steady slow increase since 1977-78 (see Table 36).

Contribution of Federal government ratio. This ratio was computed by dividing the amount of Federal government derived revenues by the total of educational and general expenditures plus mandatory transfers. According to this ratio this contribution decreased steadily as observed in Tables 32-36, for each institution and the combined institutions (The George Washington University does not report government derived revenues).

Contribution of private philanthropy. This ratio was computed by dividing the amount of endowment income by the total of educational expenditures plus mandatory transfers. This ratio is the contribution of private philanthropy through gifts, grants and contracts. The aggregate contribution of private philanthropy for the combined and individual institutions shows a steady declining trend. This decline was more remarkable at The George Washington University and less at The Catholic University of America (see Tables 32-36).

Contribution of endowment income ratio. This ratio is computed by dividing the amount of endowment income by the total educational and general expenditure. This ratio indicates a relatively slow steady increase in the low proportions of endowment and similar investment income for the combined institutions. Georgetown University and The George Washington University show a relatively steady slow increase in the contribution of endowment income, while The Catholic University of American and The American University show relatively steady proportions (see Tables 32-36). This slight improvement of the contribution of endowment income at Georgetown University and The George Washington University does not compensate for the decline in contribution by the Federal government and private philanthropy.

Contribution of sales and services of educational activities ratio. This ratio is computed by dividing the amount of sales and services of educational activities by the total educational and general expenditures plus mandatory transfers. According to this ratio for the combined institutions, the contribution of sales and services to the educational and general expenditures experienced a steady increase during the period of the study (see Table 32). The increased contribution of this source of revenue does not mean a real improvement in the revenue sources because sales and services of educational activities are not considered a regular source of revenue. This is because revenued derived from these activities are more incidental and are not supposed to be self-financed. At The American University and The Catholic University, the proportions of this ratio are relatively insignificant; at The American University the ratio indicates a slow improvement, while The Catholic University remained relatively stable at very low proportions (see Tables 33 and 34). Georgetown University is the only university with a relevant contribution of this activity to the educational and general revenues, and the corresponding ratio indicates a relatively substantial increase along the trend. This contribution compensates for the decline in contributions of the Federal government and some private philanthropy to Georgetown University (see Table 35). The George Washington University does not report revenues derived from sales and services of educational activities as such; thus, an analysis was not possible for this institution.

Policies for revenue allocation to educational and general expenditures. This section analyzes the trend in resource allocation patterns as related to expenditures of the individual and combined institutions. The selected ratios for this evaluation will be:

(1) Revenue allocation for instruction;

(2) Revenue allocation for operation and maintenance of plant; and

(3) Revenue allocation for institutional support.

1. Revenue allocation for instruction. This ratio, which measures the resources allocated to instruction in relation to the educational and general revenues of the institutions, is computed by dividing the amount of expenditures for instruction by the total educational and general revenues.

As for the combined institutions, the aggregate ratio indicates a decline in the proportion of expenditures in relation to the growth in the educational and general revenues (see Table 32). Nevertheless, this decline cannot be attributed to a loss in the emphasis on instruction. The growth in the expenditures per student (in current and constant dollars, see Tables 49 and 50), the relative stability in class size as measured by the FTE student to FTE faculty ratio (see Table 54), and the relative increase in faculty size (see Table 53), do not indicate budget reductions for instruction; however, this indicates that relatively less financial resources were required to finance the activities for instruction in comparison to the size of the educational revenues.

At The American University, this ratio also indicated a relative stability in the resources required by the function of instruction (see Table 33) and the expenditures for instruction have been consistent with class size as measured by the FTE student to FTE faculty ratio (see Table 54). This indicates that the instructional expenditures have kept pace with the educational and general revenues.

At The Catholic University the proportion of educational revenues required by the instructional activities has experienced a relative steady slow decrease in comparison to the growth in the educational and general revenues (see Revenue Allocation for Instruction Ratio, Table 34). The insufficiency of the data related to FTE faculty only allowed determination of the relationship of the student to FTE faculty in the fiscal years 1977-78 to 1979-80, and 1982-82 (see Table 54). These data do not reflect any alteration in class size and the same criteria as that described above can be applied.

At Georgetown University (see Table 35) the expenditures for instruction did not keep pace with the growth of the educational and general revenues. The revenue allocation ratio for instruction experienced a relatively steady decrease between 1973-74 and 1982-83. Compared to class size as measured by the FTE student to FTE faculty ratio (see Table 54), it can be observed that alteration in class size, reduction in faculty members (see Table 53), and reduction in expenditures per student in constant dollars between 1976-77 and 1981-83 did not occur during this time.

At The George Washington University, the revenue allocation ratio for instruction indicates that the expenditures for instruction kept pace with the educational and general revenues (see Table 36). Table 54 indicates a relative stability in the relationship of FTE students to FTE faculty, with a trend to relative reduction in class size and relatively stable expenditures per student with a tendency to increase; thus, the emphasis on instruction activities has remained stable.

2. Revenue allocation for institutional support ratio. This ratio measures the allocation of resources to institutional support in accordance with the total educational and general revenues. It is computed by dividing the amount of institutional support expenditures to total educational and general revenues. The combined institutions experienced a relatively steady increase in this type of expenditure (see Table 32). The American University maintained a relatively

steady proportion of expenditures for institutional support between 1973-74 and 1982-83 (see Table 33). At The Catholic University this type of expenditure remained relatively stable during the 10-year period (see Table 34). Georgetown University (see Table 35) and The George Washington University (see Table 36) experienced a relatively steady increase in these types of expenditures. Accordingly, the expenditures for institutional support are more stable for the institutions not operating hospitals (The American University and The Catholic University of America) than the institutions operating hospitals (The George Washington University and Georgetown University). Those operating hospital universities seemed to have difficulties controlling the growth of these expenditures.

3. Revenue allocation for operation and maintenance of plant ratio. This ratio measures the allocation of resources to institutional support in accordance with the total educational and general revenues. It is computed by dividing the amount of operation and maintenance of plant expenditures by the total educational and general revenues. According to this ratio, the operation and maintenance of plant expenditures for the combined institutions have gained relatively steady increasing proportions of the aggregate budget; consequently, less revenues will be available for investment in capital funds and those related to the primary mission of the institutions (see Table 32). At The American University, this ratio remained relatively stable,

experiencing a relatively steady slow decrease between the fiscal years 1979-80 and 1982-83 (see Table 35). At The Catholic University of America, this ratio also remained relatively stable during the 10-year period (see Table 34); however, for the hospital operating institutions (Georgetown University and The George Washington University) this ratio shows an increasing trend in the operation and maintenance of plant expenditures (see Tables 35 and 36). Thus, according to the ratios related to the trends in institutional support and operation and maintenance of plant expenditures, the operating hospital universities experienced more difficulty in the control of these kinds of expenditures and lost flexibility of resource allocation.

Balance between revenues and expenditures. This section is devoted to the detection of the ability of the institutions to live within their means. Thus, it will be possible to observe at what operational levels the institutions showed surpluses or deficits. The selected operating ratios for this analysis will be:

(1) Net educational and general revenues to total educational and general revenues;

(2) Net total revenues to total revenues;

(3) Net auxiliary enterprise revenues to total auxiliary enterprise revenues; and

(4) Net hospital revenues to total hospital revenues.

1. Net educational revenues to total educational and general revenues. This ratio measures the ability of the educational and general revenues to cover the educational and general expenditures and mandatory transfers. This ratio is computed by dividing the net educational and general revenues (total educational and general revenues minus educational and general expenditures and mandatory transfers) by the total educational and general revenues. For the combined institutions, this ratio indicates a relatively steady increasing operating deficit at the educational and general level between 1973-74 and 1980-81, with a trend to decline slowly after 1981-82 (see Table 32). This means that monies from sources other than tuition and fees, Federal government, private philanthropy, and endowment income must be derived in order to compensate for the persistent operating deficits. The American University experienced a fluctuating deficit during the 10-year period (with the exception of fiscal year 1974-75, see Table 33). The Catholic University improved its performance at this operating level after showing a relatively fluctuating deficit between 1973-74 and 1977-78, and showed a relative sufficiency of revenues to cover the educational and general expenditures (with the exception of fiscal year 1989-81, see Table 34). Georgetown University exhibits large deficits at this operating level after 1979-80. This deficit had been relatively reduced between 1973-74 and 1974-75, decreased in 1978-79 (a surplus is shown in this year), increased

substantially in 1979-80, and experienced a slow decrease since 1980 (see Table 35). The George Washington University shows the largest deficit at the educational and general level, with a tendency to remain stable (see Table 36). It can be observed that the hospital operating institutions show larger deficits than the non-hospital operating institutions at the educational and general level. These are indications that the educational and general expenditures are growing at relatively faster rates than the educational general revenues in the hospital operating universities. This circumstance is much less pronounced in the non-hospital operating universities (also see Table 52).

The deficits at the educational and general level for all the institutions (with the exception of The Catholic University of America described above) provide an explanation of the yearly increase in term credit in all the institutions, frequent utilization of interfund loans at Georgetown University and The George Washington University, and the slow accumulation of funds in the capital balances (endowment and loan funds).

2. Net total revenues to total revenues. This ratio measures the ability of the institutions to live within their means by determining the capability of current fund revenues to finance the current fund expenditures required for the day-to-day institutional operations. Such a ratio is computed by dividing the net total revenues (total

current fund revenues minus current fund expenditures and mandatory transfers) by the total current fund revenues.

According to the trends in this ratio, the combined institutions relatively have steadily improved their ability to finance the total expenditures and transfers and do not show operational deficits during the 10-year period. The detected moderate surpluses are determined by the operation of auxiliary enterprises, hospitals, and other (unclassified) sources of revenues (see Table 32). These moderate surpluses compensate for the deficits at the educational and general operational level, leaving, however, little margin for the allocation of funds to the repayment of short-term debt, the increase of liquidity, and the buildup of a solid capital reserve. Consequently, short-term credit (including deferred revenues) and interfund borrowing must compensate for the relative low liquidity levels (see Current and Liquidity Ratios, Table 32; see also Flow of Funds, Table 21).

The American University shows a relative difficulty in balancing revenues and expenditures, but shows little eventual deficit along the trend; thus this short revenue margin left by the operation must be complemented with short-term credit (including deferred revenues derived from additions to restricted funds) (see Table 33; also see Current and Liquidity Ratios, Table 33; Flow of Funds, Table 23). Thus, little margin of the total revenues is left to compensate the operational deficits at the educational and general level; this margin is allowed by surpluses derived from auxiliary and enterprise activities (see Table 33).

The Catholic University of America improved its capability to break even by not showing any operating deficits since fiscal year 1977-78, and the relatively nonexistent deficits at the educational and general level leave a little margin to apply surplus derived monies to the financing of short-term and long-term debt and other capital investment purposes. Thus, short-term credit must be be used to break even in the cash flow (see Table 34, Liquidity and Current Ratios; Flow of Funds, Table 25).

Georgetown University improved its capability to break even, showing moderate surpluses since fiscal year 1975-76 (see Table 35). Nevertheless, the above criteria are also applicable to this case in relation to funds derived from short-term credit (see Flow of Funds, Table 27; Table 35). These surpluses are mostly derived from auxiliary enterprises and hospital activities and compensate for the operational deficit at the educational and general level.

The George Washington University shows a relatively stable trend at the total operation level. Thus, moderate surpluses can be observed during the 10-year period. This surplus compensated for the relatively increasing deficits at the educational and general level, causing the same problems as in the rest of the institutions in relation to the degree of flexibility of the allocation of resources to the fulfillment of short- and long-term obligations and capital investments.

3. Net auxiliary enterprises revenues to total auxiliary enterprise revenues. This ratio measures the self-financing ability of auxiliary enterprises. It is computed by dividing the net auxiliary enterprise derived revenues (auxiliary enterprise revenues minus auxiliary enterprise expenditures and related transfers) by the total auxiliary enterprise derived revenues. The combined institutions (see Table 32), The American University (see Table 33), Georgetown University (see Table 35), and The George Washington University (see Table 36) have generated relatively large surpluses from auxiliary enterprise activities, while The Catholic University of American (see Table 34) shows relatively more deficits at this level of activity, generating consecutive deficits between the fiscal years 1979-80 and 1982-83. This lack of self-financing ability of the auxiliary enterprises at The Catholic University reduces the flexibility for resource allocation to educational and general activities as well as for the fulfillment of short- and long-term obligations and to capital fund investments.

4. Net hospital revenues to total hospital derived revenues. This ratio measures the self-financing ability of the institutions. The combined ratios of Georgetown University and The George Washington University prove that hospital activities are more than self-financing, showing relatively large steady growing surpluses during the 10-year

period (see Table 32). The institutions individually display a strong ability for the self-financing of hospital operations (see Tables 35 and 36).

Overall financial performance of the institutions. According to the previous analysis the contribution of the various educational and general revenue sources has not kept pace relatively with the educational and general expenditures as a whole. The combined and individual institutions show difficulty in breaking even at the educational and general expenditure level. The decline in Federal government and private philanthropy contributions, the difficulties in increasing endowment income, and full-time enrollments at the prevailing tuition prices reflect a relatively weak power to accomplish self-financing at the educational and general activities level, pay off short-term obligations, and accumulate financial reserves. Consequently, in the event of a decline in enrollments, the institutions would be in serious financial difficulties if the educational and general revenues were not reinforced to compensate for these declines in government and private philanthropy contributions or a probable decline in enrollments, which has been predicted for the current decade.

The allocation of resources, besides the difficulties of breaking even at the educational and general level, reflect a growing trend for the significant proportions of the budget to be controlled by the operation and maintenance of plant and educational and general expenditures. This power of the institutions (see Financial Condition, Equity Ratio, Tables 32-36). According to the trend in this ratio, the institutions showed a tendency to lose equity on their assets because the total liabilities rose faster than total assets (with the exception of Georgetown University, where these items rose relatively equally) (see Tables 22, 24, 26, 28, and 30); consequently, this trend shows a relative decline in the borrowing power and creditworthiness of the institutions. An increase in the long-term liabilities would decrease the degree of equity of the institutions (see Tables 32-36).

Net investment in plant to plant debt and institutional creditworthiness. This ratio indicates increases or declines in the borrowing power of the institutions. For the combined institutions, this ratio remained relatively stable, with a tendency to decline between fiscal years 1980-81 and 1982-83 (see Table 32). The American University also shows a slow decline in this ratio (see Table 33) as well as The Catholic University (see Table 34). Georgetown University and The George Washington University did not show any improvement in this ratio, instead showing a tendency to decline (see Tables 35 and 36). Thus, according to the trend in this ratio, the combined and individual institutions have difficulty improving their borrowing power because of the amount of resources committed to the repayment of short- and long-term debts (see Current and Liquidity Ratios, Tables 32-36; see also Flow of Funds, Tables 21, 23, 25, 27, 29).

aspect is more emphasized in the hospital operating universities (Georgetown University and The George Washington University) than in the non-hospital operating universities (The American University and The Catholic University of America). The proportion of the revenue occupied by instructional expenditures seems to indicate a relative reduction of the emphasis on instruction; however, the examination of the statistics related to the growing expenditures per student and relative stability in class size as measured by the FTE ratio indicates the opposite--a gain in efficiency at the instructional level could be a possible explanation of this circumstance in conjunction with the high internal inflation of the institutions. Nevertheless, the difficulties to minimize the expenditures for institutional support and operation and maintenance of plant tend to counteract the flexibility for resource allocation and financial risk reduction.

In relation to total revenues and expenditures, the institutions show a relatively self-financing ability to break even (with the exception of American University), to leaving, however, little margin for fulfillment of short- and long-term obligations and for the fund allocation to build up a solid capital structure that can keep pace with the growth of the institutions' operating size.

Auxiliary enterprises have been demonstrated to be self-financing activities (with the exception of The Catholic University of America) since fiscal year 1979-80 (see Table 34). In general terms, the activities of auxiliary enterprises in conjunction with short-term borrowing represents a source of funds for the institutions. This helps compensate for the deficits generated by educational and general expenditures.

The hospitals of Georgetown University and The George Washington University proved to be self-financed activities. Their large surpluses at this level of activity, in conjunction with short-term credit (including deferred revenues and interfund loans), account for the compensation of the relatively large deficits generated at the educational and general level in the hospital operating universities.

5. Evaluation of Creditworthiness

The evaluation of institutional creditworthiness is aimed at determining the ability of institutions to repay their indebtedness and to determine the ability to increase their power.

The related statistics to perform this analysis will be:

- The equity ratio;
- The plant equity ratio;
- Long-term (plant) debt to revenue ratio; and
- Change in enrollments.

The equity ratio and institutional creditworthiness. This ratio measures the degree of equity the institutions hold on their assets. In this case, the higher the value of the ratio the higher the creditworthiness and borrowing

Long-term (plant) debt to revenue ratio and institututional creditworthiness. This ratio determined that the institutions had relatively reduced their proportions of revenues committed to the repayment of indebtedness. However, this may be attributed to the faster increase of revenues over liabilities. Given that the institutions show most of the yearly income committed to compensate for deficits at the educational and general level, little margin is left for the repayment of long-term debts; consequently, short-term financing (which includes short-term external loans, interfund borrowing and deferred revenues flowing into restricted funds) is often required to maintain the equilibrium between sources and uses of funds without caussing decreases in the fund balance structure of the institutions.

Trends in enrollment. Through the examination of nonfinancial resources it has been determined that (with the exception of The American University) the institutions maintained stable enrollment and showed a relative slow increase between fiscal years 1976-77 and 1982-83 (see Tables 42 and 43). However, even when the level of enrollment has not been sensitive to changes in tuition prices (see Table 45), the trend in this resource shows difficulties in continuing to increase and maintain stability in accordance with annual changes (see Table 42). Thus, given the relevance of enrollment levels in the future generation of student derived revenues, this is another factor to be handled with caution in the attempts to increase indebtedness as related to the trends in expenditures and short-term debt.

Accordingly, the creditworthiness of the institutions show serious limitations when considering additional long-term debt. Any increase in long-term debt would continue to decrease the financial equity of the institutions and would cause a decline in the resource allocation management flexibility. This fact reflects the need to redirect the prevailing revenue structure in order to maximize the actual resources available, and intensify control on the growth of expenditures, such as operation and maintenance of plant and institutional support as well as a revision of the actual level of class size (numbers of students per instructor). Thus, the reduction of the internally high inflation of the institutions studied would help reduce the accelerated increase of the expenditures, especially those relating to educational activities, without losing emphasis on the instruction of students.

Summary

The findings of the study presented in this chapter comprise the necessary information for the formulation of useful conclusions and recommendations from the observation, analysis, and evaluation of the financial structure of four private universities of the Consortium of Universities of the Washington, D.C. Metropolitan Area. Thus, the conclusions of the study will be presented in the following chapter according to the order in which the results were described and evaluated. The findings relate to the combined and individual institutions to provide a comprehensive perspective on the financial patterns prevailing for the private universities in the Washington, D.C. metropolitan area studied.

The financial and nonfinancial measures employed for the purposes of the study indicated the major trends in the financial and nonfinancial resources by showing declines and improvements in the various financial and nonfinancial components that comprised the diverse institutional activities. Thus, the detection of trends within the components of the financial structure of the institutions, including financial condition, financial performance, creditworthiness, and overall trends in the financing of these institutions, was possible.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Overview

This chapter provides conclusions and recommendations derived from the description, analysis, and evaluation performed in the previous chapters. These conclusions and recommendations are aimed at generalizing the perceptions of the author about the financial structure of the four institutions analyzed in relation to financial condition, financial performance, and general trends in the financing of these institutions. Therefore, the general conclusions and recommendations given here will provide a comprehensive pattern of the financing of the private universities of the Consortium of Universities of the Washington, D.C. Metropolitan Area.

The study of the aggregated and individual patterns of financing provided an ample perspective on the reactions of the institutions to the influence of internal and external forces governing the institutional resources between the fiscal and academic years 1973-74 and 1982-83. The study of combined and individual contexts minimized the risk of conclusions based only on aggregate numbers. Thus, through the analysis performed in Chapter IV, the individual financial characteristics can be matched with these conclusions to detect exceptions to the general patterns of finance.

Conclusions

The institutions were found different in financial structure composition, management styles, and trends but similar in problems, including ways to control the relatively high internal inflation; to control the expenditures for operation and maintenance of plant and institutional support; to minimize the effect of debt burden on the assets equity and revenue commitment to debt; to maintain balanced budgets without increasing class size considering potential decreases in enrollment; and to accumulate financial reserves that provide for a solid capital fund base.

The declines in contributions by the Federal government, and private philanthropy, the relative stagnation of revenues derived from endowment investment derived income, and the growing trend in tuition and fee charges are signs of a relatively unstable financial revenue structure. This circumstance does not permit effective planning of the inflows and outflows of the resources due to the difficulties in the control of sources of revenue; the changing nature of the revenue sources and expenditures will not permit the formulation of policies and decisions on the basis of a relatively stable financial structure.

The purpose of this study was to describe, analyze, and evaluate the financial resources that support four private universities of the Consortium of Universities of the Washington, D.C. Metropolitan Area between the fiscal years 1973-74 and 1982-83. The conclusions related to the research questions guiding this study and stated in Chapter I are as follows.

Question No. 1: What elements have comprised the financial structure of the four selected private universisities of the Consortium of Universities of the Washington Metropolitan Area and how has each element contributed to that financial structure between 1973-74 and 1982-83?

The analysis undertaken to provide an answer to this question identified the elements forming the revenue, expenditure, and balance sheet structure and described the behavior of the data during the 10-year period covered by the study. It was found that these elements have a tendency to remain at relatively unstable proportions. The revenue structure instability is contributed to by the inability to control basic sources of revenues other than tuition and fees, i.e., Federal government and private philanthropy, which showed a declining trend. Therefore, the financial imbalances caused by these variables must be compensated for by increased proportions of contributions from other revenue sources, i.e., tuition and fees, auxiliary enterprises, and hospitals.

The expenditure structures relative instability is attributed to the difficulties in controlling the growing proportions of institutional support and operation and maintenance of plant and a relative declining trend in the proportions of expenditures for instruction.

The structure of assets, liabilities, and fund balances do not keep relatively stable proportions because of the constant short-term financial pressure caused by liquidity shortages that affect the size of the proportions in all the funds. However, no relative declines in fund balances were found in the last five years of the trend. Another debilitating factor is the tendency of assets to grow more slowly than the liabilities; furthermore, most assets are carried at book value and are not adjusted for inflation, while the liabilities are mostly expressed in current dollars.

This instability in the overall financial structure leads to the conclusion that the diversity of components in such a financial structure creates relatively unpredictable variables. This unpredictability, therefore, constitutes an obstacle to effective financial planning because of the lack of a stable base to formulate estimates. However, any attempt to make decisions and formulate policies on the basis of average proportions would be hampered by uncertain trends in the overall financial structure, as observed during the 10-year period studied here.

Question No. 2: What has been the financial condition of these private universities between 1973-74 and 1982-83?

The financial health of the institutions was found to be under persistent financial short-term and long-term financial pressure. The steady increase in short-term obligations (faster than current assets) and the relative loss of equity in the assets are signs of relative deterioration. The total revenues have relatively kept pace with the total expenditures and inflation; however, the educational and general revenues did not keep pace with the educational and general expenditures, which show a relatively steady deficit at this level of activity.

The level of enrollment of the institutions has remained relatively stable, and tuition and fees have kept pace with the expenditures per student and enrollment. All institutions show difficulties in controlling the growth of expenditures per student despite the relative stability of enrollments. Also, the institutions show a high internal inflation that reveals a trend to grow faster than inflation at the national level. The increases in faculty size and the relative stability in class size are indicators of a relative inflation.

Enrollment measured in terms of FTE students was shown to be relatively insensitive to changes in tuition prices; however, the problem of setting price limits on tuition and fees still persists. The revenues derived from tuition and fees are virtually the balancing elements in the financial structure of the institutions. Thus, in view of the inability of the institutions to maintain relatively stable student derived revenues, due to declines in Federal government and private philanthropy contributions, any eventual decline in the level of enrollments would cause a serious financial imbalance in the whole institutional financial structure--specifically the depletion of the institutional financial reserves.

The administrative policies of the institutions show difficulties in controlling short- and long-term debt, as well as the size of the operating expenditures (internal inflation). Consequently, the accumulation of financial reserves has been relatively slow and insufficient to strengthen the capital structure of the institutions. The expenditures for instructional activities did not keep pace with the growth of the educational revenues; however, the expenditures for operation and maintenance of plant and institutional support reveal difficulties that have to be controlled. Consequently, the difficulty in controlling short- and long-term debt, along with these types of expenditures, contribute to a reduction in resource management flexibility; therefore, under these circumstances the allocation of funds for the build-up of solid capital funds (e.g., endowment and loan funds) is relatively constrained.

Accordingly, the financial condition of the institutions reveals a relatively high degree of exposure to financial risk with limited possibility of reduction under the present economic conditions. At the least, the resource allocation policies should be redirected to minimize expenditures and maximize available resources in order to control the internal inflationary trend.

Question No. 3: What has been the financial performance of these institutions between 1973-74 and 1982-83?

The analysis of the financial performance of the institutions showed a deficiency in the educational and general revenues to cover the educational and general expenditures. Thus, a steady deficit at this operating level was observed along the trend line. Resources derived from non-educational and general activities, such as auxiliary enterprises or short-term loans, must compensate for this resource imbalance. The decline in contributions by the Federal government and private philanthropy, in conjunction with the inability to control increases in expenditures for operation and maintenance of plant and institutional support, were found the be the most relevant causes of this gap between educational and general revenues and expenditures. Auxiliary enterprises and hospitals proved to be relatively self-financed allowing for more than moderate surpluses in most cases. As a consequence of this imbalance between educational and general expenditures and educational and general revenues, little margin is left for the fulfillment of debt commitments and reinforcement of the capital structure.

Question No. 4: What has been the creditworthiness of these institutions between 1973-74 and 1982-83?

The institutions showed a relatively low creditworthiness due to the risk involved in the commitment of revenues to repayment of indebtedness, the loss of equity on the institutional assets, the slow trend in gaining equity on plant assets, and the slow enrollment trend. These factors indicate a potential risk increase if the long-term debt increases at the same pace as shown along the trend line. The sources of revenue did not generate sufficient surpluses to finance short-term and long-term obligations, to allocate funds to endowment and loan investments, and to compensate for the level of enrollment declines. These factors contributed to a decrease in the borrowing power of the institutions.

Question No. 5: What have been the trends in the financing of the institutions between 1973-74 and 1982-83?

The trends in financing the institutions do not show a stable basis on which to predict the financial future of the institutions. The observed high financial inflation of the institutions (higher than that at the national level), and the tendencies of the revenue, expenditure, and balance sheet structure are signs of faulty financial control. The educational and general revenues did not keep pace with the educational and general expenditures. The total liabilities show a tendency to grow faster than the total assets. These aspects are indicators of relatively short-term financial problems.

The trends in enrollment did not provide a solid basis for predicting student-derived revenues, given the uncertain basis on which enrollment is maintained in the institutions, such as uncontrollable tuition prices, and the relative low level of the loan fund that helps students pay for their tuition and fees. The exorbitant yearly increases in tuition and fees defies the willingness of the students to attend college, considering that those prices tend to eclipse the ability of the families to pay for higher education in these institutions, given the high internal inflation of the institutions. Moreover, unpredictable variables, such as the contributing potential of the Federal government and private philanthropy do not permit reasonable estimates to be made about the future flow of the institutional funds. The individual and combined analysis of the institutions surveyed in this study are delineated in Chapter IV.

Recommendations

The description, analysis and evaluation of the financial structure of private universities of the Consortium of Universities of the Washington, D.C. Area permits the formulation of the following recommendations.

1. In order to extend the control on their financial structure, the institutions of higher education that belong

to the Consortium of Universities of the Washington, D.C. Metropolitan Area should exchange financial and academic information and undertake joint efforts in the establishment of financial formulas for each institution and for the Consortium in general. Thus, for example, meetings and conferences could be arranged to discuss policies related to the reinforcement of the revenue structure to compensate for declines in the contributions of the Federal government and private philanthropy, and to reduce the accelerated increase in tuition and fees. Another point of discussion should be the maximization of revenues by minimizing expenditures per student, possibilities of increasing class size without reducing the quality of instruction, and minimizing the expenditures for institutional support and operation and maintenance of plant.

2. The high internal inflation of the institutions requires the implementation of cost-analysis research at all activity levels, including academic and administrative activities. Institutional self-assessment with emphasis on cost analysis, will permit the detection of foci of inflation. The establishment of cost standards is recommended as an approach for the control of current fund expenditures by levels of activity. Thus, the detection of deviations in relation to the standards would require the implementation of formulas to correct such deviations.

3. Other financial control instruments recommended for these purposes are those related to the establishment of

standard ratios for private higher education for the Washington area. This procedure would permit the implementation of control measures to achieve the stabilization of the components of the balance sheet, revenue, and expenditure structure. Thus, the financial planning process would be based on more uniform conditions than the actual ones used by the institutions surveyed in this study.

4. The institutions should review their borrowing policies in order to find formulas to avoid the increase of indebtedness. Thus, the commitment of resources to long-term debts would be reduced and more flexibility in resource management would be achieved.

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APPENDIX A

Sample Educational Institution

BEST COPY AVAILABLE

LAYERED BALANCE SHEET

June 30, 19____
with comparative figures at June 30, 19____

Assets

	Current Year	Prior Year
Current Funds		
Unrestricted		
Cash	$ 210,000	$ 110,000
Investments	450,000	360,000
Accounts receivable, less allowance of $18,000 both years	228,000	175,000
Inventories, at lower of cost (first-in, first-out basis) or market	90,000	80,000
Prepaid expenses and deferred charges	28,000	20,000
Total unrestricted	1,006,000	745,000
Restricted		
Cash	145,000	101,000
Investments	175,000	165,000
Accounts receivable, less allowance of $8,000 both years	68,000	160,000
Unbilled charges	72,000	—
Total restricted	460,000	426,000
Total current funds	1,466,000	1,171,000
Loan Funds		
Cash	30,000	20,000
Investments	100,000	100,000
Loans to students, faculty, and staff, less allowance of $10,000 current year and $9,000 prior year	550,000	382,000
Due from unrestricted funds	3,000	—
Total loan funds	683,000	502,000
Endowment and Similar Funds		
Cash	100,000	101,000
Investments	13,900,000	11,800,000
Total endowment and similar funds	14,000,000	11,901,000
Annuity and Life Income Funds		
Annuity funds		
Cash	$ 55,000	$ 45,000
Investments	3,260,000	3,010,000
Total annuity funds	3,315,000	3,055,000
Life income funds		
Cash	15,000	15,000
Investments	2,045,000	1,740,000
Total life income funds	2,060,000	1,755,000
Total annuity and life income funds	5,375,000	4,810,000
Plant Funds		
Unexpended		
Cash	275,000	410,000
Investments	1,285,000	1,590,000
Due from unrestricted current funds	150,000	120,000
Total unexpended	1,710,000	2,120,000
Renewals and replacements		
Cash	5,000	4,000
Investments	150,000	286,000
Deposits with trustees	100,000	90,000
Due from unrestricted current funds	5,000	—
Total renewals and replacements	260,000	380,000
Retirement of indebtedness		
Cash	50,000	40,000
Deposits with trustees	250,000	253,000
Total retirement of indebtedness	300,000	293,000
Investment in plant		
Land	500,000	500,000
Land improvements	1,000,000	1,110,000
Buildings	25,000,000	24,060,000
Equipment	15,000,000	14,200,000
Library books	100,000	80,000
Total investment in plant	41,600,000	39,950,000
Total plant funds	43,870,000	42,743,000
Agency Funds		
Cash	50,000	70,000
Investments	60,000	20,000
Total agency funds	110,000	90,000

Liabilities and Fund Balances

	Current Year	Prior Year
Current Funds		
Unrestricted		
Accounts payable	$ 125,000	$ 100,000
Accrued liabilities	20,000	15,000
Students' deposits	30,000	35,000
Due to other funds	158,000	120,000
Deferred credits	30,000	20,000
Fund balance	643,000	455,000
Total unrestricted	1,006,000	745,000
Restricted		
Accounts payable	14,000	5,000
Fund balances	446,000	421,000
Total restricted	460,000	426,000
Total current funds	1,466,000	1,171,000
Loan Funds		
Fund balances		
U.S. government grants refundable	50,000	33,000
University funds		
Restricted	483,000	369,000
Unrestricted	150,000	100,000
Total loan funds	683,000	502,000
Endowment and Similar Funds		
Fund balances		
Endowment	7,800,000	6,740,000
Term endowment	3,840,000	3,420,000
Quasi-endowment—unrestricted	1,000,000	800,000
Quasi-endowment—restricted	1,360,000	941,000
Total endowment and similar funds	14,000,000	11,901,000
Annuity and Life Income Funds		
Annuity funds		
Annuities payable	$ 2,150,000	$ 2,300,000
Fund balances	1,165,000	755,000
Total annuity funds	3,315,000	3,055,000
Life income funds		
Income payable	5,000	5,000
Fund balances	2,055,000	1,750,000
Total life income funds	2,060,000	1,755,000
Total annuity and life income funds	5,375,000	4,810,000
Plant Funds		
Unexpended		
Accounts payable	10,000	—
Notes payable	100,000	—
Bonds payable	400,000	—
Fund balances		
Restricted	1,000,000	1,860,000
Unrestricted	200,000	260,000
Total unexpended	1,710,000	2,120,000
Renewals and replacements		
Fund balances		
Restricted	25,000	180,000
Unrestricted	235,000	200,000
Total renewals and replacements	260,000	380,000
Retirement of indebtedness		
Fund balances		
Restricted	185,000	125,000
Unrestricted	115,000	168,000
Total retirement of indebtedness	300,000	293,000
Investment in plant		
Notes payable	790,000	810,000
Bonds payable	2,200,000	2,400,000
Mortgages payable	400,000	200,000
Net investment in plant	38,210,000	36,540,000
Total investment in plant	41,600,000	39,950,000
Total plant funds	43,870,000	42,743,000
Agency Funds		
Deposits held in custody for others	110,000	90,000
Total agency funds	110,000	90,000

SOURCE: *Administrative Service*, section 5:7 (Washington, D.C.: NACUBO, 1974), pp. 2-3.

APPENDIX B

Sample Educational Institution

STATEMENT OF CURRENT FUNDS REVENUES, EXPENDITURES, AND OTHER CHANGES

Year Ended June 30, 19____

	Current Year			Prior
	Unrestricted	Restricted	Total	Year Total
Revenues				
Tuition and Fees	$2,600,000		$2,600,000	$2,300,000
Governmental Appropriations—Federal	500,000		500,000	500,000
Governmental Appropriations—State	700,000		700,000	700,000
Governmental Appropriations—Local	100,000		100,000	100.000
Governmental Grants and Contracts—Federal	20,000	$ 375,000	395,000	350,000
Governmental Grants and Contracts—State	10,000	25,000	35,000	200,000
Governmental Grants and Contracts—Local	5,000	25,000	30,000	45,000
Private Gifts, Grants, and Contracts	850,000	380,000	1,230,000	1,190,000
Endowment Income	325,000	209,000	534,000	500,000
Sales and Services of Educational Activities	190,000		190,000	195,000
Sales and Services of Auxiliary Enterprises	2,200,000		2,200,000	2,100,000
Other Sources (if any)	40,000		40,000	
Total Current Revenues	7,540,000	1,014,000	8,554,000	8,180,000
Expenditures and Mandatory Transfers				
Educational and General				
Instruction	2,960,000	489,000	3,449,000	3,300,000
Research	100,000	400,000	500,000	650,00
Public Service	130,000	25,000	155,000	175,000
Academic Support	250,000		250,000	225,000
Student Services	200,000		200,000	195,000
Institutional Support	450,000		450,000	445,000
Operation and Maintenance of Plant	220,000		220,000	200,000
Scholarships and Fellowships	90,000	100,000	190,000	180,000
Educational and General Expenditures	4,400,000	1,014,000	5,414,000	5,370,000
Mandatory Transfers for:				
Provision for Debt on Educational Plant	190,000		190,000	130,000
Loan Fund Matching Grants	2,000		2,000	
Total Educational and General	4,592,000	1,014,000	5,606,000	5,500,000
Auxiliary Enterprises				
Expenditures	1,830,000		1,830.000	1,730,000
Mandatory Transfers/Auxiliary Enterprises	320,000		320,000	320.000
Total Auxiliary Enterprises	2,150.000		2,150,000	2,050,000
Total Expenditures and Mandatory Transfers	6,742,000	1,014,000	7,756,000	7,550,000
Other Transfers and Additions/(Deductions)				
Excess of Restricted Receipts over Transfers to Revenues		45.000	45.000	40,000
Refunded to Grantors		(20,000)	(20,000)	
Unrestricted Gifts Allocated to Other Funds	(650,000)		(650,000)	(510.000)
Portion of Quasi-Endowment Gains Appropriated	40,000		40,000	
Net Increase in Fund Balances	186.000	25,000	213,000	160,000

There are several possible formats for a Statement of Current Funds Revenues, Expenditures, and Other Changes. Another format is shown in section 5:7 of *Administrative Service* (Washington, D.C.: NACUBO. 1974), pp. 6-7. Although the formats vary, the amounts shown in this illustration are identical to those in the *Administrative Service*.

APPENDIX C

Sample Educational Institution

STATEMENT OF CHANGES IN FUND BALANCES
Year Ended June 30, 19____

(Figures in Thousands of Dollars)			Current Funds					Plant Funds			
			Unrestricted	Restricted	Loan Funds	Endowment and Similar Funds	Annuity and Life Income Funds	Unexpended	Renewal and Replacement	Retirement of Indebtedness	Investment in Plant
Additions	Tuition and Fees		2,600								
	Governmental Appropriations	Local									
		State	1,300					50			
		Federal									
	Governmental Grants and Contracts	Local									
		State									
		Federal	35	500							
	Private Gifts, Grants, and Contracts		850	370	100	1,500	800	115		65	15
	Investment Income	Unrestricted	325								
		Restricted		224	12	10		5	5	5	
	Net Realized Gains on Sales of Investments	Unrestricted				109					
		Restricted			4	50		10	5	5	
	Sales and Services of Auxiliary Enterprises		2,200								
	Sales and Services of Educational Activities		190								
	Other (Itemize if material)	Additions to Plant Facilities									1,550
		Retirement of Indebtedness									220
		Other	40		25	10		50		3	
Total Additions			7,540	1,094	141	1,679	800	230	10	78	1,785
Deductions	Current Fund Expenditures	Educational and General	4,400	1,014							
		Noneducational and General (including Auxiliary Enterprises)	1,830								
	Loan Cancellations and Write-Offs				1						
	Expended for Plant Facilities							1,200	300		
	Debt Service	Principal								220	
		Interest								190	
	Other (itemize if material)	Expired Term Endowment				90					
		Disposal of Plant Facilities									115
		Other		55	11		85			1	
Total Deductions			6,230	1,069	12	90	85	1,200	300	411	115
Transfers	Mandatory Transfers Into/(Out of)	Debt Service	(340)							340	
		Renewal and Replacement	(170)						170		
		Loan Fund Matching Grant	(2)		2						
		Other (itemize if material)									
	Nonmandatory Transfers Into/(Out of)	Distribution of Capital Gains	40			(40)					
		Designation of Unrestricted Funds	(650)		50	550		50			
		Other (itemize if material)									
Total Transfers Into/(Out of)			(1,122)		52	510		50	170	340	
Net Increase/(Decrease) for the Year			188	25	181	2,099	715	(920)	(120)	7	1,670
Fund Balance—Beginning of Year			455	421	502	11,901	2,505	2,120	380	293	36,540
Fund Balance—End of Year			643	446	683	14,000	3,220	1,200	260	300	38,210

NOTE: There are several possible formats for a Statement of Changes in Fund Balances. Another format is shown in section 5:7 of *Administrative Service* (Washington, D.C.: NACUBO, 1974), pp. 4-5. Although the formats vary, the amounts shown in this illustration are identical to those in *Administrative Service*.

APPENDIX D

APPENDIX E

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National Institute of
of Independent
Colleges and Universities

Suite 601
1717 Massachusetts Avenue, N.W.
Washington, D.C. 20036
202/483-9434

October 1, 1984

Mr. Rafael E. Beauford
5535 Columbia Pike, #207
Arlington, VA 22204

Dear Mr. Beauford,

Recently you requested permission to reproduce Tables 38 and 45 from our publication entitled *Fifth Report on Financial and Educational Trends in the Independent Sector of American Higher Education*.

Permission to use this information for your doctoral dissertation is hereby granted. It goes along with my best wishes for a successful defense of your research.

Sincerely,

Frank J. Balz

Frank J. Balz
Associate Executive Director

NACUBO National Association of College and University Business Officers
One Dupont Circle, Suite 510, Washington, D.C. 20036-1178 • 202/861-2500

August 22, 1984

To: Mr. Rafael E. Beaufond

Permission is hereby granted for you to reprint the financial statements from Part 5 of Collge and University Business Administration for use in your dissertation.

Sincerely,

Abbott Wainwright

Abbott Wainwright
Director
Business Affairs

AW/vdp